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TELEGRAPHIC
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CHEMISTS LONDON.

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E.C.

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Free the World over. Single Copies, 4d. each;
Winter and Summer Issues' 1s. each, Post Free.

In the Press, and will be Issued early in July,
A NEW EDITION
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DRUGGISTS' SUNDRIES PRICE LIST,

Enlarged and Thoroughly Revised.

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2s. 6d. per dozen. Six dozen Carriage free.

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BATTERSEA, S.W.

**NEAREST STATION,
OLD BATTERSEA STATION
West London Extension Railway**

THE CHEMIST & DRUGGIST SUPPLEMENT.

SATURDAY, JUNE 19 1897.

Businesses for Disposal
Businesses Wanted
Premises to Let
Auction Sales

ALSO EXCHANGE COLUMN.

For Bargains see last page of this Supplement.

Partnerships
Situations Vacant
Situations Wanted
Miscellaneous

A Copy of this Supplement is inserted in every number issued of "The Chemist and Druggist."

The Man who pays 1/- or 3/6

for an advertisement in this Supplement has to pay cash; so he becomes an exceptionally critical person in respect to the value of the advertisement. That is a fair statement. Now, what do we find? Advertisers tell us their results—ten, twenty, thirty or more replies, summed up in the five words—"Suited! don't repeat the ad." And alongside that there is the fact that this Supplement has grown from a modest thing with a dozen advertisements in it to the present proportions.

The growth has been as gradual as phenomenal, which is the best proof that it is based on a sound foundation—extensive circulation and quick returns. When you want to advertise, please remember

"The Chemist and Druggist" Supplement.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

VENDORS have the advantage of Messrs. O. & Co.'s direct attention and advice as to value without additional fee.

PURCHASERS are invited to forward a statement of their requirements, which will be notified in a register free of charge.

VALUATIONS having always been a prominent feature, Messrs. O. & Co. trust that the lengthened period during which they have enjoyed the confidence of the profession will be regarded as a sufficient proof of the sincerity of their endeavours to conduct these transactions in an honourable and straightforward manner.

1.—£2,500.—**SOUTH KENSINGTON**.—First-class Dispensing Business, giving a *net profit* of about £630 per annum; the shop is handsomely fitted and is situated in busy main road; position unique; commodious residence, on lease; price £2,500.

2.—£3,500.—**LONDON (Residential locality)**.—Dispensing and Retail Business; returns between £3,000 and £3,500 yearly; *net profit* £750 per annum; the shop is handsomely fitted and well stocked; good house, on lease; price about £2,800.

3.—£1,000.—**SOUTH KENSINGTON**.—Good-class Dispensing and Retail Business, situate in residential locality; returns average about £1,000 per annum; the shop is well fitted and stocked; commodious house, on lease; offer wanted.

4.—£1,000.—**LONDON, W.C. (busy main thoroughfare)**.—Brisk Retail Business, chiefly ready money; returns exceed £1,000 yearly (average); the shop is nicely fitted and well stocked; price £500.

5.—£1,000.—**NORWOOD**.—Well-fitted, handsome, modern Pharmacy; returns present rate £1,000, with *profits fully up to average*; comfortable residence, with garden; may be purchased by valuation or lump sum; about £860 required.

6.—£1,000.—**LONDON, N.E.**—Good-class Business, Retail, Dispensing, and Prescribing; returns present rate £1,000; *net profit* £350; well-fitted shop and good stock; price about £650.

7.—£1,200.—**LONDON, N.W.**—Dispensing and Retail Business; returns about £1,200; the shop is well fitted and stocked, and is situate in good shopping thoroughfare; commodious residence, on lease; about £900 required.

8.—**PARTNERSHIP**.—Wholesale and Retail, situate in a good provincial town; population about 17,000, with large agricultural district surrounding; the business has been established over a century; the half-share produces a net income of about £500 yearly; the investment of about £1,500 will be required; an immediate introduction will be given, and the fullest particulars furnished to a suitable applicant, references being interchanged; splendid opening for an energetic man; no stores in town.

9.—£1,000.—**PORTSMOUTH (near)**.—Dispensing and Retail Business; returns exceed £1,000; *profit* about £500; well-fitted pharmacy and good stock; price £500.

10.—£600.—**SOMERSET (Health Resort)**.—Light Retail Business, situate in busy main street; returns £600, increasing; *very profitable*; good house, held on lease; price £400.

11.—£1,200.—**CHATHAM**.—Old-established Business, Retail, Dispensing, and Prescribing, well situate in busy thoroughfare; returns between £1,100 and £1,200 yearly; *net profit* £300; price £700.

12.—£600.—**SOUTH WALES**.—Retail and Prescribing Business; returns exceed £600 yearly; *net profit* £200; small house; rent £20 per annum; price £390, or offer entertained.

13.—£800.—**SOUTH COAST**.—Dispensing and Retail Business; returns last year £800; the shop is handsomely fitted and well stocked; convenient house, private entrance; price £500.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London Agent.

SPECIAL NOTICE.—Messrs. ORRIDGE & CO. have a large number of Businesses for Sale suitable for Gentlemen with Small Capital, from £200 to £500.

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37 Waterloo Street, LEICESTER.

References to Principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

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£2,000 returns.—**NORTH**.—General Mixed Retail, Oils, Paints, Colours, &c.; for sale in consequence of ill-health of vendor; the business is easily and inexpensively worked, and realises a net profit of about £600 per annum; valuation of stock and fixtures about £600, which presents an unusually large remuneration for so small a capital.

£1,300 returns.—**LIVERPOOL**.—First class Retail and Dispensing, at good prices; shop large and handsomely fitted; excellent residence with garden, lawn, conservatory, &c.; returns £900; and Branch of similar class returning £400; price for the two £900.

£500 returns.—**YORKS**.—Profitable Light Retail, under unqualified manager, in town of over 20,000 inhabitants, and only one qualified chemist; price £450.

£600 returns.—**BERKS**.—Good-class Light Retail in pretty locality; good house, yard, and garden; there is also appointment, beside the returns given, producing £100 per annum; price £600.

£1,100 returns.—**MIDLANDS**.—Good-class Retail, fair Dispensing, and other specialities, in good market and manufacturing town of about 20,000; price £850.

£820 returns.—**BIRMINGHAM**.—Exceptionally profitable General Mixed Retail; net profit over £300; good shop, medium house; rent £18 4s., lease 13 years to run; price £500, of which £150 can remain on security.

£800 returns.—**NOTTINGHAM**.—General Retail, Oils, Colours, &c.; Branch; has done about double when personally attended to, and can again; good position large shop; price £500, or valuation.

£700 returns.—**LANCASHIRE**.—Old-established Business, in principal street of large town; can with personal attention be much increased; price £300 or valuation.

£550 returns.—**POTTERIES**.—Light Retail, Prescribing, &c., in rapidly growing town; patents &c.; price £400.

£300 returns.—**NOTTS**.—Good General and thoroughly reliable Retail; death vacancy; can be much increased by energetic man; good house, conservatory, &c.; price £700.

Vendors of good businesses can be at once supplied with buyers by F. J. BRETT.

VALUATIONS.

F. J. BRETT has been well known for many years throughout England and Wales as a reliable Valuer, and his extensive experience in all branches of the trade renders his services equally valuable to Vendors and Buyers.

BERDOE & CO.

CHEMISTS' TRANSFER AGENTS AND VALUERS,

35 JEWRY STREET, FENCHURCH STREET, E.C.

Established 1870.

1.—**SOUTH COAST**.—First-class Light Retail and Dispensing Business, with a net profit of £700 yearly; large convenient house, low rent; handsomely fitted; exceptionally good position; price £2,200.

2.—**HAMPSHIRE**.—Good-class Family and Dispensing Business; returns over £1,000; profits £500; handsome double-fronted shop, heavily stocked; convenient 10-roomed house; price £900.

3.—**DEVON COAST**.—Light Retail and Dispensing Business; returns £1,000; handsome shop in exceptionally good position; well fitted and stocked; same hands 20 years; price £550.

4.—**BUCKS**.—Retail and Prescribing Business, under management; returns £5 weekly; rent £22 on lease; let off £18 to Dentist; shop is well fitted and stocked; price £150, or valuation.

5.—**SOUTH COAST**.—Retail, Dispensing, and Prescribing Business; returns £700; excellent position; good house, main road; exceptional reasons for leaving; price £350, or valuation.

6.—**HOME COUNTY**.—Light Retail, Dispensing, and Prescribing Business; returns £1,200; net profit £450; rent low; well situated in principal thoroughfare; rent £45; price £900.

7.—**NORFOLK COAST**.—Light Retail and Dispensing Business; returns £720, capable of increase; good house, low rent; excellent position; price £550, or valuation.

8.—**SOUTH WALES**.—Light Retail and Prescribing Business; returns £1,000; net profit £400; large well-fitted shop, good house; trial allowed; price £750, or reasonable offer.

9.—**YORKSHIRE**.—Branch Business, with Post-office; Light Retail and Prescribing trade; returns £400 under management, principal would do £600; shop is well fitted and stocked; price £300.

10.—**LONDON, S.W.**.—Good-class Light Retail and Dispensing Business; handsome double-fronted corner shop, heavily stocked; returns £1,300; over 3,000 prescriptions dispensed yearly; price £950.

Particulars of any of the above and others free on application.

NOTICE.

Gentlemen doing business through Messrs. Berdoe have the advantage of their 27 years' experience, during which time they have been solely engaged in selling and valuing Chemists' Businesses. All valuations personally conducted.

NO CHARGE TO PURCHASERS.

35 JEWRY ST., FENCHURCH ST., CITY.

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JUDD & MANNERS

Chemists' Valuers, Transfer Agents, & Accountants,

76 CANNON STREET, LONDON, E.C.

VALUATIONS made for Probate or Transfer by a fully qualified member of the firm. Books Audited, Balance Sheets Prepared and Chartered Accountants' Certificate given.

Terms (moderate) on application.

GLOUCESTERSHIRE.—An old-established Country trade in centre of a busy market town, doing about £700 a year, for immediate disposal; the net profit is about £300; price £675.

MIDDLESEX.—Good Retail and Dispensing trade, doing about £1,000 yearly; price £750; good house and handsome pharmacy.

MIDLANDS (South).—A good old Country trade, with first-class residence and nice garden; returns nearly £900; net profit about 33 per cent.; price £750; we strongly recommend this as a sound investment.

ESSEX.—Light Retail and Prescribing trade, to which Dentistry might be added with advantage; returns £950; price £800; first-rate house.

LONDON, N.W..—Retail and Prescribing trade; returns £450; price £250; this is a profitable business, and only wants seeing.

LONDON W..—Ready-money Prescribing trade; returns £400; price £200; we strongly recommend this as a reliable investment.

KENT.—Family trade, now under management through death of late proprietor; returns £8 weekly; price £275.

HOME COUNTY.—Good-class Country Business; returns about £1,300 yearly, at good prices; excellent premises in centre of market town; held on lease at a moderate rent; price £1,000.

HOME COUNTY.—Family trade; returns £900; price £800; large and convenient premises, with large garden.

CRYSTAL PALACE DISTRICT.—Light Retail and Prescribing trade, under management of an Assistant; returning £8 weekly; very profitable; rent £33; corner premises; price £300 or offer.

LEICESTERSHIRE.—Good-class Country trade; returns £700; very handsome Pharmacy and good house; rent £60; price £550.

HOME COUNTY (Death Vacancy).—About 20 miles from London; returns £800; price £750, or a valuation can be arranged.

SURREY.—Good-class Retail and Dispensing, returning under a manager about £6 weekly; valuation of stock and fixtures will be accepted.

Full particulars of any of the above sent free on application.

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CHEMISTS' VALUERS AND TRANSFER AGENTS.

25 YEARS' PRACTICAL EXPERIENCE

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All VALUATIONS and STOCKTAKINGS are conducted personally by the Principals. Terms on application.

INVERNESS.—Dispensing Business; price £900. **CROYDON**.—Price £350. **JERSEY**.—Splendid position (qualification not necessary); price £500. **BRIGHTON**.—Central position; price £450. **SEASIDE**.—Principal street; price £525. **BERKSHIRE**.—Handsome shop; price £650. **STAFFORDSHIRE**.—Price £600.

SPECIAL BARGAINS.

LONDON.—Main thoroughfare; corner position; price £120. **HAMPSHIRE**.—Good town, principal street; price £210. **SWANSEA**.—Well-fitted shop; price £50, £25 down, remainder by instalments.

Particulars on application.

56 CHEAPSIDE, LONDON, E.C.

(Next Door to Bow Church.)

THOMAS TOMLINSON & SON,

M.P.S.,

Chemists' Transfer Agents and Valuers,

9 NEW CANNON STREET, MANCHESTER.

44 YEARS' EXPERIENCE.

Valuations Conducted with careful attention to detail.

BUSINESS WANTED.—Thomas Tomlinson & Son, having on their books an extensive list of gentlemen who have entrusted them with commissions to look up a good genuine Business, intending sellers can rely upon being at once with all despatch put into communication with bona-fide buyers without publicity and the annoyance of answering "curiosity" applications. No charge made unless Sale is effected.

BUSINESSES FOR DISPOSAL of various classes and amounts of returns ranging from £200 to £4,000. Particulars given to bona-fide applicants stating outline of requirements.

Have constant inquiries for REGISTERED ASSISTANTS. Applicants introduced free.

NO CHARGE TO PURCHASERS.

Telegraphic Address—"TOMTOM."

BUSINESSES FOR DISPOSAL

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

BIRMINGHAM (Suburb).—Old-established (30 years) Chemist's Shop, in suburb of Birmingham; fittings by Treble & Co.; lately valued at £250; to Let or to be Sold for £150, half down, interest on remainder 5 per cent.; rent £45; house let off £22; suitable for energetic man who would go in for Druggery, for which there is a capital opening. Apply, J. E. P., 2 Himley Villas, Hamstead Rd., Handsworth, Birmingham.

BRISTOL.—£250 cash.—Small profitable Business in Bristol, chiefly Prescribing, own Pr. ps., and Cash Retail; established 40 years; full prices except for Patents, which are almost nil; mahogany fittings, plate-glass front, lamp, and side-door; rent only £30; invoices, books, &c. open to buyer. Z. (158/24), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CHESHIRE.—For Disposal, a high-class Dispensing Business in a busy town in Cheshire; about 4,000 prescriptions Dispensed annually; returns between £800 and £900; gross profits £450; rent £65; large and commodious house, part of which could be let off; in present hands 30 years; owner retiring. For particulars address J. Guy, Esq., The Mount, Queen's Park, Chester. No agents.

CORNWALL.—£1,000.—In one of the best business towns in Cornwall; established 70 years; large Consulting and Prescribing Chemist's Business, with Dentistry; good Retail; well stocked; capital house and shop, long lease; full working order; valuable proprietary articles; fortune for good business man; no agents; £500 down, £500 in 5 years at 3½ per cent. Sampson Taylor Rowe, Surgeon Dentist and Chemist, Redruth, Cornwall.

GREAT GRIMSBY.—Old-established, ready-money Business, in main thoroughfare, principally Dispensing; returns about £600; rent £60; immediate possession of business; stock at valuation; proprietor's sudden death last week cause of sale. Apply, Mrs. E. Burnham, 76 Victoria Street, Great Grimsby.

LANCASHIRE HEALTH RESORT.—Small Dispensing and select Retail Business for disposal, in central position of main street; offers scope for development on modern lines. "Nemo" (157/35), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LANCASHIRE.—Cash Business; average returns £200 (two hundred pounds) per week, increasing, at good profits; Patents sale below the average; own specialities have good sale (one would pay entire rent); vendor, who is retiring, owns premises and would grant long lease; every investigation allowed. Don't reply out of curiosity; if you mean business, address "Chemist" (157/26), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LAXEY, ISLE OF MAN.—Business lately carried on by Mr. William Ferguson; good stock; seaside mining village, with resident population in village and district of 3,000; season visitors increasing yearly; only shop in district; 7 miles from Douglas by electric railway. Full particulars from Mr. J. T. Cowin, Glen, Laxey; Mr. J. O. Caine, Moany Quill, Lonan; or the Assistant in charge.

LEEDS.—Genuine Branch, in thickly-populated neighbourhood; returns £340, at good profits; valuation of stock and fixtures about £140; good opening for qualified man. Full particulars on application, with references, to 157/21, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LONDON.—Ready-money Business, occupying commanding position, with extensive premises, in busy main thoroughfare; long lease, low rent; returns average over £2,500 a year, at excellent profits; old-established, with several good and unusual Proprietaries; lowest price, £2,400 as a going concern; only a cash buyer entertained. Write, with references, "Enterprise" (132/28), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LONDON, S.E. (in busy part of main road, Crystal Palace suburb).—A nice-class Dispensing and Retail Business; returning nearly £1,000; position warrants much extension; shop beautifully fitted; a thoroughly convenient 10-roomed house, small garden, side entrance; price £860 or offer; about £650 stock and fittings; books showing working expenses; explanatory reasons for disposal; no agents. "Honour" (157/6), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LONDON, W.—£200 cash, or on good security; exceptional offer to effect a quick sale; London (West), Cash Retail, Prescribing, and Extractions; lock-up shop, with parlour; well fitted and stocked; shows net profit of nearly £200 per annum; could be very much increased with personal attention. W. J. (157/38), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SOUTH-WEST OF ENGLAND.—Market town; population 8,000; Light Retail, Dispensing, and Prescribing Business; returns nearly £1,200; same hands 28 years; selling to retire; rent £45; long lease granted; good house and garden; price £900. "Apenta" (157/10), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

STOKE-ON-TRENT.—Genuine Cash Business; main thoroughfare; good position; long lease; good living accommodation; rent £36 per annum; price £450; full particulars to bona-fide buyers. Address, "Drugs" (157/25), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SOUTH COAST.—In a very rapidly increasing town, a Light Retail and Dispensing Business (in same hands 20 years) in a very healthy and pleasing situation; the neighbourhood increasing fast; very productive fruit and vegetable gardens; rent £30; price £250; personal applications only entertained. Apply, Davy, Hill & Son, Yates & Hicks, Southwark Street, London.

WEST OF ENGLAND (near the Sea).—For immediate Disposal, two Drug Businesses, unopposed; both convenient premises; good opportunity for general hands; in present hands some years; prices low. Address, J. W. J., Nailsea, Somersetshire.

ANYONE desirous of obtaining a Business showing a profit of about £400 per annum, with no other Chemist within 4 miles, can have particulars from "Phenacetin" (156/18), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESS for Sale.—In a thriving Tyneside town, an old-established Business, with Gilbey's agency; capable of much increase; proprietor retiring; returns £1,200; price £800; rent £100; premises belong to owner; a good investment for an energetic man. Apply, in first instance, to Mr. Duncan, c/o Messrs. Ismay & Sons, Wholesale Druggists, Newcastle-on-Tyne.

GOOD-CLASS old-established Business, in remarkably healthy country market town, in South Wales; large beautifully-fitted convenient shop, well stocked; takings about £5 a week under indifferent management; could be easily doubled by sociable Churchman; splendid opening for Dentistry; small Dispensing appointment, introduction given; large convenient house with garden and vinery; rent £35; delightful neighbourhood, fishing, shooting, &c.; price less than valuation. Apply, Peake & Co., Chemists, 1 Bridewell Street, Bristol.

IMMEDIATE Disposal—Drug Stores, in small country town; much neglected; have done £760; good quantity of Prescribing and Horse and Cattle Medicines done; quite capable of returning £1,000; incoming about £120. Apply, A.P.S. (155/23), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WHOLESALE, consisting largely of own Patents, Proprietary, and Packed Goods, in large town within 20 miles of Manchester; the business has never been out of the family, and a large fortune has been realised, with ample opportunity for a buyer to do so, as the business is in excellent working order, and the net profit is estimated at over £600; price for plant, machinery, patents, trade-marks, fixture, fittings, utensils, and goodwill £700, and stock at valuation, about £1,200; a considerable part of this can remain on security. Applicants, enclosing references, can have further particulars of F. J. Brett, Valuer, 37 Waterloo Street, Leicester.

13 MILES from London, in a small town on main line of rail, rapidly increasing, now carried on as a Branch under management; returns £500; rent and taxes under £24, including residue; price £360. "Branch" (155/37), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£375.—**SURREY.**—Light Retail, Dispensing, and Prescribing Business, in large village, without opposition; large shop, well fitted and stocked; 8 rooms, fair-size garden stable, &c.; rent £30; returns £560; net profit £270; price £375; cause of sale taken partnership. 155/36, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESSES WANTED.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

BRISTOL.—Advertiser wishes to buy a Chemist and Druggist's Business (large or small), either Dispensing, Prescribing, Mixed or General trade, situated in Bristol or near Bristol; applicants please state lowest price, all cash down. Address "Mouser" (156/7), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MANCHESTER (near).—Wanted, to procure a genuine Retail Business, showing a net profit of from £120 to £150 per annum, within 10 miles of Manchester. Address, A. B., 3 Primrose Street, Lower Broughton, Manchester.

WANTED. a good-class Retail, Dispensing, and Prescribing Business (Lancashire preferred); returns £800 to £1,200; must bear fullest investigation; strictest confidence. Address, X. Y. Z. (155/24), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SALES BY AUCTION.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

MID-DERBYSHIRE.

MESSRS. WATSONS will sell by Auction, on Wednesday, June 30, 1897, at Miners Arms Inn, South Normanton, near Alfreton, commodious Freehold House and Shop; best position in main thoroughfares of above rapidly-rising town, well fitted, large yard and out-buildings, where for past ten years good Mixed Country Drug Business has been conducted; good opening for Aerated Water Manufactory and General Bottling Business; local Post Office attached, and Wine and Spirit Off. For particulars and to view apply, W. Farnsworth, Chemist, South Normanton, near Alfreton.

TO LET.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

IMPORTANT NOTICE to LARGE TRADERS.

13 HANDSOME SHOPS, now being erected
in the main

HOLLOWAY ROAD, London, N.

(Opposite Railway Station
on the Great Northern Railway Line.)

Population, two mile radius. 875,276.

One of the finest positions in the whole of London.

J. SAINSBURY.

Purveyor of High-class PROVISIONS, POULTRY, and GAME,
will OPEN the CENTRE PREMISES.

For full particulars and photo of elevation

Apply to L. F. Evans, 15a Bennett Street, London, S.E.

SITUATIONS OPEN.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

RETAIL.

ALDERSHOT.—Improve in good-class business. State age, height, salary, enclosing carte, Allen & Lloyd, Aldershot.

ALTRINCHAM.—There will be a vacancy shortly for a smart active Junior, outdoors, about 19, for a Light Retail and Dispensing business; must be quick and reliable, and a good counterman. Address, stating age, experience, references, and salary required (with photo), to E. Hughes, Chemist, Altrincham, Cheshire.

BEDFORD.—Assistant, accustomed to good-class Retail and Dispensing business. Apply, stating height, age, salary required, and when disengaged, to John Ekins, Chemist, 97 High Street, Bedford.

BIRMINGHAM.—Lady Dispenser.—Wanted, for the Birmingham and Midland Hospital for Skin and Urinary Diseases, a Chief Assistant Dispenser, with Minor qualification. Applications, stating age and salary required, with testimonials, to be sent in before 26th inst., to the Honorary Secretary, J. E. Hartley, 13 St. Paul's Square, Birmingham. Information respecting duties, &c., may be obtained from Miss Brittain, at the Hospital.

BRIDGWATER.—Active Junior required, at once; Light Retail and Dispensing. Send full particulars, salary required (indoors), and photo (which will be returned), to Bonchier, 67, 69, 71 Eastover, Bridgwater.

BRIGHTON.—Wanted, a qualified Senior Assistant. Apply, with full particulars, to Glaisyer & Kemp, Brighton.

BUCKINGHAM.—Sirett & Son require a Junior (indoors) Assistant; candidate must give age, height, past experience; state whether able to extract teeth, and enclose photograph, which will be returned.

CAPE TOWN.—Assistant required, immediately, of good experience, holding Minor qualification; neat and accurate Dispenser; must write a good legible hand; aged about 25; North Countryman preferred; salary, first year £120 per annum, second year £132, third year £144; sleeping accommodation provided; second-class passage paid out, conditional on a three years' agreement being signed; candidates must hold undeniable references. Address, "Cape," c/o Evans, Lescher & Webb, 60 Bartholomew Close, London, E.C.

CARDIFF.—Wanted, immediately, by Anthony & Co., Cardiff, one qualified Senior (Minor); must be a first-class Counterman, energetic, experienced, and of gentlemanly appearance and address; also two smart Juniors; exceptional references required in each case.

COVENTRY.—An Assistant wanted, at once; must be a good Dispenser and Counterman. Send particulars, state salary, and enclose photo, to Lovett & Bones, Coventry.

CROYDON.—Wanted, a Junior Assistant for the Retail Counter; outdoors. Apply, giving full particulars, to D. P. Roberts, Drug and Chemical Store, North End, Croydon.

DORKING.—Junior Assistant, in a good-class Family business; preference given to one with knowledge of Dentistry. Please send full particulars and photo (which will be returned), F. W. Doulhday (Limited), Store Chemists, Dorking.

EXETER.—Wanted, gentlemanly Junior, 19 to 20, in good-class Dispensing and quick Retail business; indoors; must have had Dispensing experience. "Sigma," Evans, Gadd & Co., Exeter.

GLOUCESTER.—Immediately, an Assistant, as Junior (indoors); willing and obliging; one with knowledge of the Photographic business preferred. Send particulars, with photo (if possible), to Walwin, The Gloster Pharmacy, Gloucester.

GRIMSBY.—Wanted, at once, a competent and energetic Assistant, with thorough business tact, and capable of taking charge during principal's absence; character must bear strict investigation; aged from 25 to 30; must be efficient Prescriber and Tooth-extractor and good Salesman, and accustomed to Photographic trade. Apply, stating salary required (outdoors), references to last two employers, and usual full particulars, also enclosing photo (to be returned), to "Freeman," 3 Hainton Terrace, Grimsby.

GUILDFORD.—An Assistant; about 24; good counterman; indoors. Apply, stating full particulars, to Wheeler, Chemist, Guildford.

HEREFORD.—Indoor; wanted, immediately, thoroughly reliable Junior; quick, good Counterman and Dispenser. Send photo (to be returned) and full particulars to Edwin Guy, Chemist, Hereford.

HORNCASTLE.—Qualified Manager (married preferred), for an established Family and Dispensing business. State salary required, and enclose references, to Carlton & Sons, Horncastle.

KENT.—A trustworthy and reliable Assistant (single) is required for a Family and Dispensing business in a quiet town in Kent; short hours; no Sunday duty; good references indispensable. Apply, personally only (no letters), to W. W. Flood & Co., 205 & 208 Borough High Street, S.E., after Friday next.

KINGSTON-ON-THAMES.—Middle of July, qualified Assistant, capable of taking charge; also good Junior, to work with proprietor. William E. Clarke, Chemist, Kingston-on-Thames.

LEAMINGTON.—Assistant for front Counter; indoors. State age, experience, &c., to County Drug Stores, Leamington.

LIVERPOOL.—Wanted, for July 12, a reliable qualified Assistant (indoors), in a very good-class Dispensing and Light Retail business; about 24 years of age; weekly half-holiday; separate sitting-room; salary £65. Apply, with full particulars and photo, to R. Thomas, Chemist, Lark Lane, Liverpool.

LANDUDNO.—Wanted, a qualified Assistant for 3 or 4 months. Apply, J. Burton, Chemist, Llandudno.

LANDUDNO.—At once, good general Assistant, for 3 or 4 months; outdoors. Apply, with full particulars, to J. Winter, Llandudno.

LANELLY.—Wanted, a Junior Assistant, at Morgan W. James's, Chemist, Llanelly, S. Wales.

LONDON, E.—Dispenser wanted for one month; start July 3rd or 5th; indoors; City Surgeons. Letters, with usual references, to "Surgeon," c/o Mr. Smart, Chemist, Aldgate.

LONDON, E.—Wanted, next October, qualified Christian Dispenser for Medical Mission, East London; part-time; required to teach some Dispensing. Apply, by letter, stating qualifications and giving references, to Dr. Harford-Battersby, 33 Hanfrith Road, Stratford, E.

RETAIL—continued.

LONDON, S.E.—Junior or part-time; indoors; knowledge of Photographic trade preferred. Reply, with full particulars as to age, references, salary, &c., to Bunker, 135 Great Dover Street, S.E.

LONDON (Suburban).—Winton's Drug Co. require the services of a gentlemanly and energetic Assistant; applicants should give full details of their past experience, and enclose photo; salary 50s. weekly. Letter only, "Manager," 13 Whitworth Road, S. Norwood.

LONDON, W.—Junior Assistant wanted; part or full time. Apply, K., 74 New Bond Street, W.

LONDON, S.W.—Wanted, a Junior Assistant; indoors; two are kept. Apply, with usual particulars, enclosing photo, to be returned, to W. T. Frost, Masou's Pharmacy, Parson's Green, S.W.

LONDON, W.—Part-time situation; board and lodging in lieu of salary. W. H. V. (155/6), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LONDON, W.—£200 a year for a smart, intelligent, business-like man, with experience; capable of taking management and control of staff in a large West-end business. Wanted also, Junior Dispenser; personal interview absolutely necessary, between 3 and 4 p.m. S. F. Goss (Limited), 201 Regent Street, W.

LYME REGIS.—Wanted, Junior Assistant; indoors. Apply, stating age, height, creed, salary required, and full particulars, with photo (to be returned), to G. Henley, Chemist and Druggist, Lyme Regis, Dorset.

MARGATE.—Junior Assistant, immediately. Full particulars, with carte if possible, V. Woolls, Chemist, Margate.

MARGATE.—Wanted, at once, Junior Assistant for the Season; indoors. R. Pettman, Margate.

NEWCASTLE (STAFFS).—Assistant wanted for a Light Retail and Dispensing Business. State salary required, references, and full particulars to E. H. Croydon, Newcastle, Staffs. Photo, if possible, to be returned.

NEWCASTLE-ON-TYNE.—Wanted immediately, energetic Assistant; good at Counter work; quick and accurate Dispenser; good address. Photo (to be returned), must accompany each application. J. C. Ritson, 30 Blackett Street, Newcastle-on-Tyne.

NOTTINGHAM.—Wanted, Junior Assistant, indoors, for Mixed business. Apply, H. Shippam, Dispensing Chemist, Alfreton Road, Nottingham.

OAKHAM.—Wanted, trustworthy, permanent Assistant; indoors; accurate Dispenser and good Counterman; qualified preferred. Apply, stating age, height, salary required, and full particulars, with photo, to J. Wellington, Chemist, Oakham.

PARISH OF CAMBERWELL.—The Guardians of the Poor of the Parish of St. Giles, Camberwell, require the services of a qualified Dispenser to undertake temporary work at the Dispensaries of the Parish for a period of 7 weeks, commencing 24th July, at a remuneration of £2 5s. per week. Candidates must be Licentiates of the Apothecaries' Company of London, or duly registered under the Pharmacy Act, 1838, or some other authority of law in that behalf. Applications, stating age, with testimonials of recent date, to be forwarded on or before Saturday, the 26th instant, to the undersigned.

CHARLES S. STEVENS,
Guardians' Offices, 29 Peckham Road, S.E., Clerk to the Guardians.
16th June, 1897.

PORTSMOUTH.—Trustworthy, obliging Assistant required; outdoors. State age, if qualified, salary required, and full particulars, Timothy White Company, Chemists, Portsmouth.

RHYL, N. WALES.—Wanted, Locum, to manage Branch during July and August; live out. Apply, with references, salary required, and photo (returnable), at once, to Pugh, The Chemist, Rhyl, N. Wales.

SEACOMBE.—Wanted, a Junior Improver, about 18, in a Light Retail and Dispensing business; time allowed for recreation and attending Liverpool School of Pharmacy. Apply, stating age, height, and salary expected, with reference, also photo, to Hinkley, Seacombe, Liverpool.

SOUTH AFRICA.—Wanted, for a Colonial seaport town, Assistant, not over 30; Minor qualification; 3 years' engagement; passage paid out; salary £150, £165, and £180 respectively. Apply, with full particulars, enclosing photo and copy of testimonials, to "South Africa" (129/21), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SOUTH COAST.—qualified; Senior or Manager; Store trade; interview at THE CHEMIST AND DRUGGIST Office, June 18th, 3 p.m., or by letter to "Spec" (158/1), c/o Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SOUTH COAST.—Improver, Junior, or Turnover Apprentice.—Wanted, immediately, for Light Retail and Dispensing business; one only kept; time for study and half-day each week off; no Sunday duty; comfortable home. Apply, stating age, height, and usual particulars, and enclose photo (if possible), to Smith, Chemist, Portsea.

SOUTHPORT.—Junior Assistant for a good-class Retail and Dispensing business; indoors; knowledge of Photographic and Chemical Apparatus trade preferred, but not essential; three assistants kept. Full particulars to J. R. Cave, Chemist, Southport.

TORQUAY.—An Assistant, as second Dispenser, at Holloway's London Drug Stores, Torquay; 4 kept. Photo and particulars to Mr. E. A. Holloway, 34 Fleet Street.

WATERLOO, LIVERPOOL.—Wanted, an Assistant, of good appearance and address, accustomed to good-class Retail and Dispensing; good Counterman; about 24; indoors; Sunday duty light. Please state usual particulars, age, height, and salary required and when disengaged, with photo (which will be returned), to T. Hamuett, Chemist, Waterloo, Liverpool.

WOLVERHAMPTON.—Qualified Assistant for quick trade; outdoors; no Sunday duty; weekly half-day holiday. State salary, age, references, and full particulars, with photo, if possible (will return same), to The Stores, 26 Queen Street, Wolverhampton.

ASSISTANT wanted, with a view to partnership or succession. Apply, "Partner" (157/4), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AN Assistant, qualified, single (indoors), to take charge with an Apprentice of a small Branch in a country town; good salary to suitable gentleman; Dispensing duty every third evening from 8 to 11 p.m., and all day every third Sunday; half-day holiday each week from 2 o'clock; hours of business, 8.30 to 8 p.m., Saturday till 10 p.m. Apply, with photo (to be returned), stating salary and all usual particulars, to "Statim," c/o Hodgkinson, Treacher & Clarke, 101 Whitecross Street, London, E.C.

BRANCH-MANAGER wanted; expert Tooth-extractor specially wanted; a pushing, conscientious, and industrious Counterman will be liberally treated; married man, to live on the premises. Full particulars, with photo, to A. Hagon, Chemist, Cardiff.

JUNIOR wanted; time allowed for study. State requirements, also experience, and salary expected, enclosing photo, if convenient, to "Menthol" (158/20), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

M. BEETHAM & SON, Cheltenham, require a thoroughly qualified Dispenser; must have been used to first-class business and be well recommended. Apply as above, stating references, age, and salary required (indoors), and enclose carte, which will be returned.

PARISH OF ST. PANCRAS, LONDON.

APPOINTMENT of Dispenser.—Additional advertisement.—Ladies holding the necessary qualifications will be eligible, and preference will be given to candidates (male or female) possessing the Minor or Major qualification of the Pharmaceutical Society. Applications, in writing, to be sent to me, the undersigned, before the 19th instant. Alfred A. Millward, Clerk to the Guardians, Vestry Hall, Pancras Road, N.W., 10th June, 1897.

WHOLESALE.

LONDON.—Energetic young man, about 21, wanted for Manufacturer's office; must have had good office experience and be willing to make himself generally useful. Apply, stating experience and salary expected, to M. R. A., 59 Tooley Street, S.E.

LONDON.—A Traveller.—A Wholesale Drug House in the City has a vacancy on their representative staff; the ground to be covered is in London and suburbs; gentlemen accustomed to calling on Doctors and Chemists, and with a connection already, will find themselves liberally treated. Address, in first instance, to H. T. (158/14), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATIONS OPEN—*cont.*

WHOLESALE—continued.

LONDON.—Wanted, Representative to call on Wholesale Druggists, Drysalers, &c., in London. Write, giving age, experience, and full particulars, to "Drugs," 8 Staple Inn, W.O.

JUNIOR Invoice Clerk required at once, for a firm of Wholesale Druggists. Apply, stating age, references, and salary expected, to Box 159, P.O., Newcastle-on-Tyne.

FOREMAN, Druggists' Specialities.—Foreman to superintend four or five hands; good experience and references indispensable. By letter only, "London Druggis," c/o Smith, 92 Arthur Road, North Brixton, S.W.

WANTED, an Agent in each of the following places—viz., London, Dublin, Edinburgh, Glasgow, and Paris—who has a connection amongst Chemists and Hairdressers, and who will canvass them for the sale of a new Proprietary Toilet article; liberal commission; at agents' risk. Write to 137/37, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATIONS WANTED.

1s. for 12 words or less; 6d. for every 6 words beyond.

RETAIL.

QUALIFIED; 8 years' good experience; aged 24. A., 199 Mere Road, Leicester.

LOCUM-TENENS; qualified; disengaged July 12. C. M., 347 Green Lanes, N.

JUNIOR; 5 years'; brisk Store trade. J. B., 27 Delverton Road, Newington, S.E.

GOOD all-round quick trade (in or out), or as Locum; 44. D., Pearce's, Chemist, Edmonton.

ASSISTANT, speaking French and German. "Delta," 27 Manor Road, Brockley, S.E.

MANAGER (Temporary); 45; town or country. Baker, 154 Fortess Road, London, N.W.

WET Counterman or Dispenser; 23; good references. H. Rotheray, Rawdon, near Leeds.

ASSISTANT; 24; 8 years' experience. "Chemicus," 144 Warwick Road, Kensington, W.

LOCUM-TENENS; 45; qualified; good experience. T. J., 9 Camden Gardens, Shepherd's Bush, W.

MANAGER; qualified; 29; good experience. H. C., 1 Elm Park Terrace, Fulham Road, S.W.

LOCUM; qualified; 29; highest references; disengaged. "Chemist," 184 Bridge Road, Battersea, S.W.

LOCUM; after June 30; abstainer; 29; experienced; Major. Williams, c/o Barrat, Chemist, Sevenoaks.

PART-TIME, in vicinity of Wills's; unqualified; abstainer. "Assistant," Callow House, Fulham Road.

JUNIOR; 19; tall; 4 years' experience; disengaged beginning of July. Murless, Wotton-under-Edge.

ASSISTANT; disengaged from 12 to 6; moderate terms. "Borax," 137 Farringdon Road, London, E.C.

LOCUM; qualified; first-class London experience; disengaged 21st. "Chemist," 26 New Road, Gravesend.

ASSISTANT; Locum; disengaged; good references; aged 29; gentlemanly. M., 272 Old Kent Road, S.E.

IMPROVER; aged 19; height 5 ft. 5 in.; Stores not objected to. Address, "Ras," 14 St. Aldate's, Oxford.

SENIOR Assistant; qualified; 28; season or otherwise. "Chemist," 19 Hamilton Gardens, St. John's Wood.

ASSISTANT or Locum; good appearance and address. Howard, 67 Sistova Road, Balham, London, S.W.

LOCUM-TENENS; first class Dispensing experience. "Iliad," c/o Mr. Millward, Woodville Road, Cardiff.

LOCUM-TENENS; 16 years' good experience; disengaged June 24. "Chemicus," Dunford House, Weymouth.

COUNTRY.—Immediately; Junior; 21; tall; Photographer. "Stramonium," 11 High Street, Hanley, Staffs.

ASSISTANT; 27; unqualified; good Dispenser, Prescriber, Extractor; Midlands. J. D., Portland Villa, Stourbridge.

LOCUM; 31; London and Country experience; disengaged June 30. "Locum," c/o Mr. Hadfield, Chemist, Dartmouth.

LADY (21) seeks engagement as Junior Assistant; 4 years' experience. B., 44 Heathfield Road, Handsworth, Birmingham.

DISPENSER to Surgeon; 15 years' experience; married; Prescriber, Extractor. Woodman, Washington Road, Bridgwater.

JUNIOR; 20; 4 years' experience; situation in first-class business; Dispensing preferred. "Vinum," 60 High Street, Dorking.

LOCUM; Eastern Counties preferred; 12 years' experience. 158/4, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LOCUM; disengaged; 13 years' experience; well recommended; can Extract; good Prescriber. Stone, Chemist, Chesham, Bucks.

MANAGER (Branch) or Assistant; Extractor; 45; qualified; married. "Chemicus," 43 Leamington Terrace, Tong Road, Leeds.

JUNIOR; aged 20; 4 years' experience in good class Retail and Dispensing. Apply, A. M. Evans, c/o Mr. Lloyd, Chemist, Colwyn Bay.

LOCUM or temporary Assistant; day, week, or month; town or country; terms moderate. "Extractor," 43 Latimer Rd., Wimbledon.

DISPENSER; bookkeeper; Surgeons or Public Institutions; good varied experience; disengaged. "Rhei," 17 Halford Road, Fulham, S.W.

DISPENSER to Surgeon or firm; experienced; good references; aged 24; London or suburbs. M., 25 Zig Zag Road, Liscard, Cheshire.

QUALIFIED; tall; 7½ years' Dispensing experience; good London house preferred; highest references. "Chemicus," 38 Rae Street, Dumfries.

MANCHESTER.—Minor Student, part-time or time for evening classes; outdoors; references. "Student," 17 Exchange Street, Sheffield.

LOCUM.—F. G. Shrimpton, Grove Street, Oxford, is open to engagements with Chemists, Surgeons, or Institutions; qualified; first-class references.

ASSISTANT or Branch Manager; 28; married; 13 years' experience; good reference; disengaged. M., 71 Tontine Street, Folkestone.

WANTED. Instruction and Practice in Tooth-extraction, &c. State terms and time to J. Carter, 137 St. John's Hill, New Wandsworth, S.W.

ASSISTANT; outdoors; unqualified; good experience and reference; good bookkeeper; aged 27; tall. Address, G. G., 336 Alfreton Road, Nottingham.

DISPENSER to Chemist; Minor; abstainer; 24; outdoors; London; disengaged. 158/8, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

MINOR (28) requires situation with view to Partnership or Succession. "Venez" (155/5), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

RETAIL—continued.

MANAGER; permanency; married; active business man, experienced in all branches; excellent references. "Minor," The Pharmacy, Whitstable-on-Sea, Kent.

HOLIDAY Locum; retired Pharmaceutical Chemist desiring occasional occupation; abstainer; disengaged July 8. "Chemist," 45 New Walk, Leicester.

LOCUM-TENENS, qualified, 30, having next three weeks vacant, would be pleased to undertake management. Apply, K., 126 Upper Stanhope Street, Liverpool.

JUNIOR; aged 20; London or large town preferred; 4 years' experience in good-class business; tall; excellent references. E. B. Dunkerton, Eastgate, Lincoln.

LADY (qualified) wishes Dispensership in Hospital or Surgeon's Dispensary; has had good experience. 156/36, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AS Manager, with view to early purchase, business returning £8 to £12 weekly; London preferred. X. (158/16), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

ASSISTANT, 23½, requires situation as Dispenser in City; short hours; highest references; 6 years' experience. W. Jones, Holbrook Villa, 33 Finchley Road, St. John's Wood, London, N.W.

MEDICAL Student desires part-time berth as Dispenser to Doctor or Chemist; experienced; excellent references. "Med." (155/17), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

DENTIST.—Wanted, thorough instruction in Operative and Mechanical Dentistry, all branches. State full particulars and lowest inclusive terms to "Dental," 7 Middleton Road, New Wandsworth, S.W.

QUALIFIED; 20 years' experience; good references (family); or as Dispenser to a firm of Surgeons or Hospital, Managership for widow, or other suitable position. "Alpha," 26 High Street, Abergavenny.

MANAGER or Outdoor Assistant; permanency; 27; qualified; disengaged; first-class West-end and provincial experience. "Aconite" (157/12), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WHOLESALE.

TRAVELLER.—Sundries, packed goods; excellent references. May, Ferndale, Canbury Avenue, Kingston.

AS Traveller; good house; 6½ years present situation. Apply, "Plymothian," 13 Carlton Terrace, Plymouth.

TRAVELLER; good Drug House; London, Suburbs; will interview at any time. "Phenazonnin," 29 Ifield Road, S.W.

HEAD Warehouseman; aged 30; excellent references. Address, 157/37, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TRAVELLER; Drugs or Sundries; many years' high-class Retail experience; excellent references. 158/4, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TRAVELLER in North of England, well connected with the Drug trade in Lancashire and Yorkshire; well recommended; 20 years' excellent character and experience; full particulars freely. Barrett (155/19), Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TRAVELLER, to represent first-class house only, or exploit really good speciality; has done business with best Chemists, Wholesale and Retail, of England and Ireland; also knows all best Doctors; well up in Sundries and Drugs; good address; highest possible references; aged 35. Address, H., 49 Gap Road, Wimbledon, London, S.W.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

GLYCERINE AND CUCUMBER immediately prepared by using "Crème aux Concombres," which produces a splendid creamy inseparable preparation at the cost of 50 oz. for 1s. 6d.; send for sample ½ lb., post free, 1s. 6d. Marshalls (Limited), 27 Red Lion Square.

NOTICE.

HERMETICALLY SEALED JARS.

It having been alleged by the Automatic Air-Tight Cover (Limited) that it had come to their knowledge that the Hermetically Sealed Jar Syndicate (Limited), of Warrington, were offering a Jar which they were advised was a direct infringement of their Patents, the Hermetically Sealed Jar Syndicate (Limited) instituted proceedings against the Automatic Air-Tight Cover (Limited) for an Injunction to Restrain the defendants from alleging by letter, circulars, advertisement, or in any other manner, that the Hermetically Sealed Jars manufactured by the Hermetically Sealed Jar Syndicate (Limited) are constructed in infringement of the legal rights of the defendants, and from threatening the plaintiffs, their agents, or customers, with legal proceedings in connection with the manufacture or sale by the plaintiffs or their agents, or the use by their customers of the Hermetically Sealed Jars; and on the plaintiffs applying, on the 28th day of May, 1897, for the Injunction accordingly the defendants gave an undertaking, in the terms of the Injunction asked for, pending the trial of the action.

OPPENHEIM & MALKIN,

ST. HELENS,

Solicitors for the Hermetically Sealed Jar Syndicate (Limited).

DAISY Window Attractions are so successful that Mr. Agar, chemist, South Bank, wrote to say that had he not occasionally taken it out, the window would most certainly have been pressed in by the crowd. If you want your window smashing thus, write for particulars. "Daisy," Leeds.

STICKY FLY PAPERS: the very best made; your own name, designs and address; send for samples and save 50 per cent.; the best. White, Chemist, Leicester. Sulphur Tablets, 38s. cwt.; Sulphur and Sarsaparilla, 45s.; free samples. Sanitary Disinfecting Shells, 5-gross lots, £1 2s. 6d., carriage paid.

CHEMISTS' Shop-fittings.—Ranges mahogany drawers, with bevelled-edge glass labels and cut-glass knobs, shelving above, lockers below; mahogany dispensing-screens; counters with glass-case fronts; wall-cases; bent-front and flat-top counter-cases; counter-desks; tooth-brush cases; complete shop-rounds, &c.; every requisite for Chemists, new and second-hand; extensive stock to select from, at extremely low prices; practical men sent to all parts; estimates free. Matthews, Chemists' Fitter, 14 Manchester Street, Liverpool.

CHEMISTS' Shop-fittings.—Ready for immediate use.—12-ft. mahogany-top counter, plate-glass casing in front, £11 10s.; two ditto, 9 ft. 6 in. long each, £18 10s. the pair, and quantity of others; plate-glass perfume-case, and counter-desk, 47s. 6d.; handsome complete wall-fitting, drug-drawers, poison-cupboard, lockers, shelving, &c., 10 ft. long, £12 10s.; 14 ft. ditto, £18 10s.; and several 12 ft. long and other sizes; and every requisite for complete or partial fitting at especially low prices; bottles, ung. jars wall-cases, counter-cases, &c., &c. Philip Josephs, Shop Fitter, 54 Old Street, City Road, London, E.C.

CHEMISTS' Shop Fittings for disposal, owing to the owners having bought other premises and fixtures:—2 nests of mahogany drawers, glass knobs and labels, comprising about 60 small drawers and 40 large, also cupboard adjoining small lot; range of shelving above, with mahogany cornice and pillars; large plate-glass wall-case, 10 ft. high, and 9 ft. 6 in. long, bottom will be 18 in. wide, top part 8 in. wide; counter, with drawers, &c. 6 ft. 6 in. long; 2 small counter-cases; 4 globe-stands, mahogany; also quantity of surplus stock, and about 8 doz. shop-rounds and ung. jars; window-enclosures, mirror front and sides, glass shelves and supports; large specie-jar; the whole to be sold in one lot, cheap; worth attention; the fittings are solid mahogany, and made by Lynch & Co. Particulars, and cards to view, may be had from T. E. Butler & Son, Town Hall Lane, Leicester.

CUCUMBER AND GLYCERINE.

ROUSE'S Cucumber Paste is the best for preparing Cucumber Emulsion. Formulae and labels free with each jar; ½ lb. (for 3 lbs. emulsion), 2s. 3d.; 1 lb., 4s. 3d.; 7 lbs., 25s., post free. Rouse, 61 Charlotte Street, London, W.

N.B.—Cucumbers actually enter into the composition of this article.

COGNAC OIL.

Guaranteed absolutely Pure Water-white, and Green, of Best existing Purity and Concentration. Described in "The Chemist and Druggist," page 183, January 30, 1897.

Manufactured as a Spécialité since 1835 by

EM. KERN, Edenkoben, Palatinate, BAVARIA.



EXCHANGE COLUMN-BARGAINS

TERMS.

DEPOSIT.—The purchaser of anything advertised in the Exchange Column may remit the amount to us, and we only pay the money deposited on advice from the remitter. We charge a commission of 6d. on any transaction of £3 or less, or 1s. if above that amount.

Limited to the Advertisements of Surplus Stock, Shop Fittings, Apparatus, Photographic Goods, Books and Periodicals, Formulae, Addresses Wanted, and Articles Wanted.

$\frac{1}{2}$ d. per word with name and address.

1d. per word if we register the address and attach a number.

No Advertisement inserted for less than 6d.

BOOKS AND PERIODICALS.

Cooley's "Encyclopedia," last edition, unbound, £1. L., 45 Picton Road, Wavertree, Liverpool.

Atfield (15th), 5s. 6d., post free; other Minor books: list. JEFFS, 169 Hemingford Road, W.

Muter's "Chemistry," "Botany" and "Latin Notes"; what offers? G. A., 52 Kennington Oval.

For Sale, *The Chemist and Druggist*, 1884, 1885, 1886, 1887, 1890, 1891; what offers? 40/21, Office of the C. & D.

"Pharmaceutical Journal," set from commencement, well bound; bargain. D., Pearce's, Chemist, Edmonton.

PROPRIETARY ARTICLES.

1½ gross frog-in-throat, in dozen boxes; ½ lb. ol. lavand. ang., old (Allen & Hanburys'); 25-oz. tin Howard's quinine, 25-oz. tin B.P.; what offers; send halfpenny stamp for list of 50 doz. saleable patents. EASTMAN, Forest Lane, Stratford.

SHARES.

For Sale, 1 Camwal share; what offers? IRVING, Chemist, Newton-Stewart, N.B.

SHOP FITTINGS.

Dainty fittings (complets) for chemist's shop about 10 ft. square, comprising shelving, cornice, large handsome case and cupboard of stained pine, run of mahogany drawers, glass knobs, bevelled-glass labels, 2 counter-cases, 137 bottles (32-oz. to 8-oz.), pots (dark blue), syrup-bottles (turquoise-blue), and 21 blue jars; all new January, 1896, except the drawers; set drawers under counter (label, cash, &c.), scales, weights, tap and sink, &c.; first good offer accepted, all or part. McKEE, Cash Chemist, Tunstall.

APPARATUS.

Sartorius short-beam balance, set of weights (gramme), chemical apparatus and reagent bottles. Particulars, write, WEBBER, 41 Johnson Street, Cheetham, Manchester.

For Sale.—1 Chinnery's patent portable aerated soda-water machine, with bottler attached, 11l.; and 1 for chemicals only, 9l.; as good as new. Address, 21/40, Office of the C. & D.

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1-oz., 1½ & 2-oz.	3 & 4-oz.	6 & 8-oz.	10-oz.	12-oz.	16-oz.	20-oz.	24-oz.	32-oz.	40-oz.
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No. 42a.—DISPENSING, *quinine tint*, round edged, flat or oval, plain or graduated,  Brand, per gross—

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1-oz.	1½-oz.	2-oz.	3-oz.	4-oz.	6-oz.	8-oz.	10-oz.	12-oz.	16-oz.	20-oz.	24-oz.	32-oz.	40-oz.
9/-	9/-	9/3	10/9	10/9	12/-	12/-	18/-	18/-	21/6	27/-	32/6	43/-	49/-

IN ANY QUANTITY, FROM STOCK.

1-oz.	1½-oz.	2-oz.	3-oz.	4-oz.	6-oz.	8-oz.	10-oz.	12-oz.	16-oz.	20-oz.	24-oz.	32-oz.	40-oz.
9/6	9/6	9/9	11/3	11/3	12/6	12/6	19/-	19/-	23/-	28/6	34/-	45/-	51/6

CONTENTS OF ORIGINAL CRATES, VIZ.:—

	1-oz.	2 oz.	3-oz.	4-oz.	6-oz.	8-oz.	10-oz.	12-oz.	16-oz.	20-oz.	32-oz.	40-oz.
About	12	10	8	7	6	5	4	3½	2½	2	1½	1 gross.

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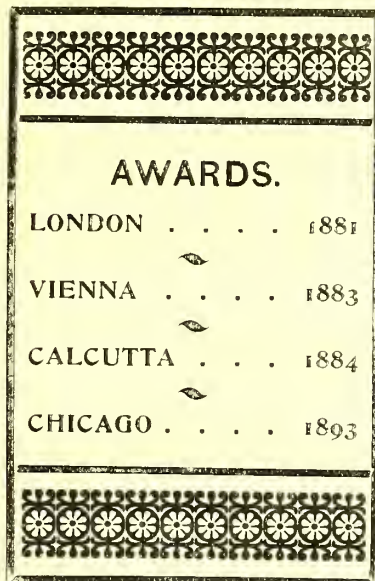
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years, And guard - ed well her peo - ple true, Thro'
breeze; Pro - claim Vic - to - ria's love of right: Her

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life's mixed hopes and fears. The mil - lions in her
just and wise de - crees. In this fair land of

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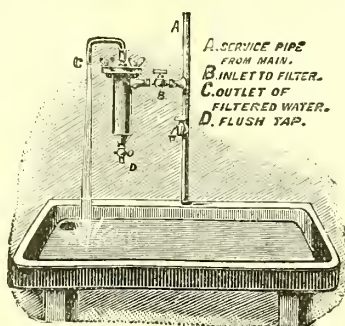
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CHEMICAL NOTATION AND NOMENCLATURE
INORGANIC CHEMISTRY, NON-METALS
DESCRIPTIVE AND SYSTEMATIC BOTANY
SPECIAL TOPICS

SECTION B. 20 WEEKS.

GENERAL PHARMACEUTICAL PROCESSES
INORGANIC CHEMISTRY, METALS
PRINCIPLES OF PHARMACOLOGY
QUALITATIVE CHEMICAL ANALYSIS
SPECIAL TOPICS

SENIOR YEAR.

SECTION A. 20 WEEKS.

GENERAL ORGANIC CHEMISTRY
PHARMACEUTICAL ARITHMETIC
MATERIA MEDICA, BEGINNING
SPECIAL TOPICS

SECTION B. 20 WEEKS.

INORGANIC CHEMICALS OF THE PHARMACOPŒIA
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MATERIA MEDICA CONTINUED
PRESCRIPTIONS AND DISPENSING
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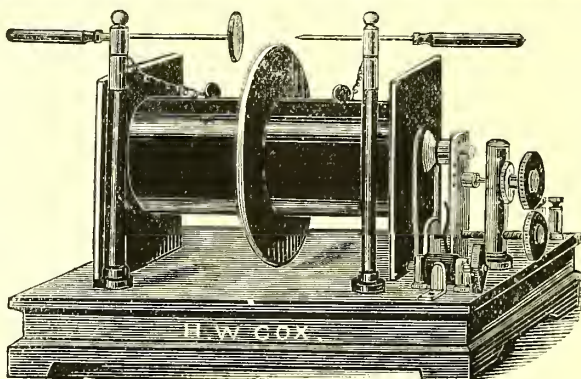
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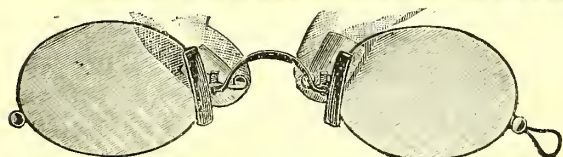
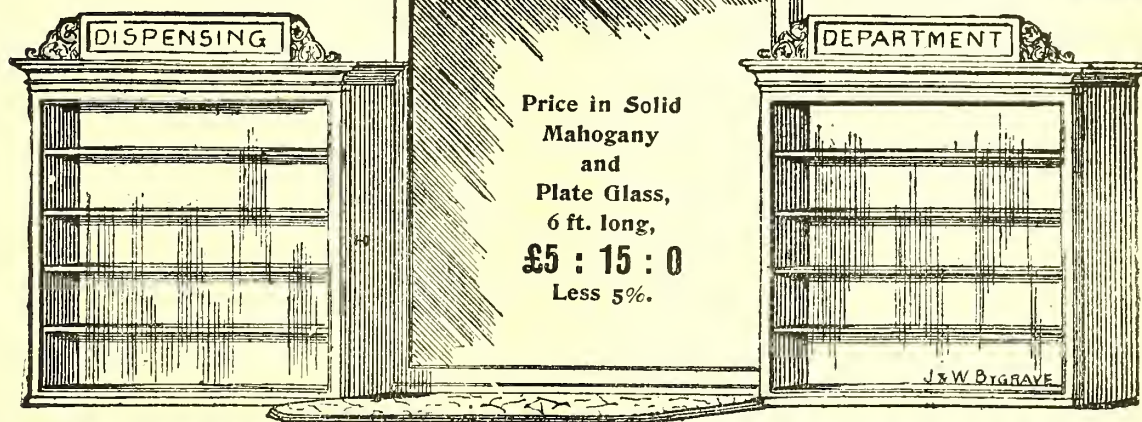
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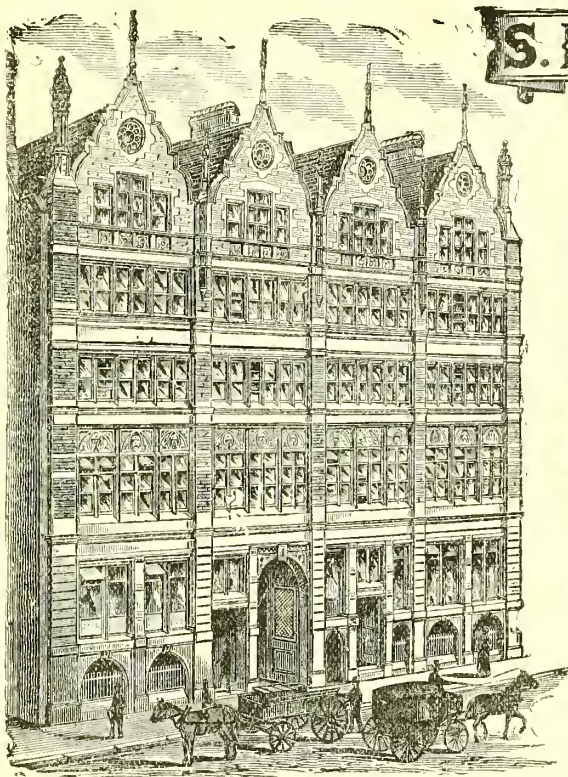
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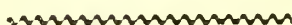


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Apply, **HUGGINS' SOAP WORKS, LIM.**
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DIPLOMA OF HONOUR,
MADRID, 1890.

CAPETOWN, 1878.



LONDON, 1876.



AMSTERDAM, 1883.



INTERNATIONAL HEALTH, 1884.



BRUSSELS, 1889.



MADRID, 1890.

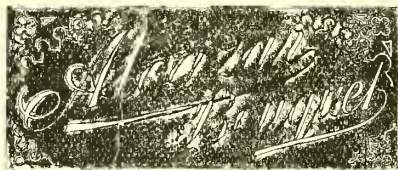


TUNIS, 1891.

DIPLOMA OF HONOUR,
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JAMES SINCLAIR & SON,

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A DELIGHTFULLY PERFUMED SOAP

Made of selected materials. Superfatted and non-alkaline. In high repute among the Nobility and Aristocracy in England and the Colonies.

In Boxes of Three Tablets, per doz. boxes 12/-.

VELOURS or VELVET SOAP.

Balsamic and Musk Odour; elegantly wrapped; Purest Soap; in Boxes of three Tablets, per doz. boxes 9/-.

TREBLE-MILLED Toilet Soap.

In Varieties—Windsor, Rose, Almond, Glycerine and Cucumber, Elder-flower, Violet, Heliotrope, Cold Cream, Opoponax, Honey, Cold Cream and Honey, in boxes of three tablets, per doz. 6/-.
In boxes of 12 tablets 22/-.

MEDICATED SOAPS.

Coal Tar, Carbolic, Camphor, Camphor and Carbolic, Juniper Tar and Borax Soap, in boxes of 3 tablets, per doz. boxes, 6/-.

Special Brands from Special Formulas prepared with greatest care.

TOILET SOAPS IN VARIOUS SHAPED TABLETS.

FLORAL, HONEY, ROSE, WINDSOR, ALMOND, GLYCERINE, LAVENDER, &c., &c.

Tablets, 4, 5, or 6 to the pound, in 7-lb. and 14-lb. boxes, per cwt. 44/-,
ditto, cheaper, less perfume 38/-.

TRANSPARENT SOAPS.

Orange, Lemon, or Cedar, oval tablets, per gross 10/-
do. do., smaller size, do. 8/-

SPECIAL SOAPS FOR EXPORT TRADE FROM 28/-

PETROLEUM JELLY, pure white, in tins about 8 lbs., 56/- per cwt; 28 lbs., 50/- per cwt.; in barrels about 4 cwt., 46/- per cwt. Ditto, Yellow, tins 30/- per cwt.; 28 lbs., 28/- per cwt.; in barrels about 4 cwt., 24/- per cwt.

We will spare no effort to secure Business. A Trial Solicited.

JAKSON'S Lavender Water

A One Shilling Bottle of this Perfume
guaranteed to contain more value in
Lavender than a usually
sold.



THE
LARGEST
GROWER
AND
DISTILLER
* AT *
MITCHAM.

John Jackson & Co
MITCHAM

To obtain the
genuine see name
on each bottle.

OVER 500 ACRES IN CULTIVATION

Do you require Petroleum Jelly?

If so, SNOWDON'S PETROLEUM JELLY, White or Yellow, is the best and purest obtainable. It fulfils all the requirements of the B.P., is pronounced by the Medical Profession to be unsurpassed, and DR. S. RIDEAL, D.Sc. Lond., F.I.C., F.C.S., states that the various kinds are of "uniform good quality."

Have you seen our New Speciality in Petroleum Jelly?

The "SNOWDRIFT" (Regd.) BRAND is of a tough or stringy consistency, and is highly commended by *The Hospital*, which says of it "That its tough or stringy nature is a great improvement. We learn that already the demand for the "Snowdrift" Brand is very great. It is cheaper than ordinary vaseline, and we confidently recommend it to the Medical Profession." Samples and Prices will be sent on application.

Send for a Sample of "Snowdrift."

Address SNOWDON, SONS & Co., Millwall, London, E.

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Telephone: 5127.

HAIRINE.

For Colouring the Hair. Sold in 6 tints, one liquid.

8d. Sample size 4/- per doz
3/6 Large " 22/- "
10/6 Extra " 84/- "



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SAMPLES Supplied to the Trade on pretty hanging Showcards at 4/- per doz.

This Popular Article is Largely Advertised, and kept at all Wholesale Houses.

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NAN-SEN AN ENGLISH CACHOU.

SELLS AT TASTE!!

18/- per Gross of Packets. Retail at 3d.

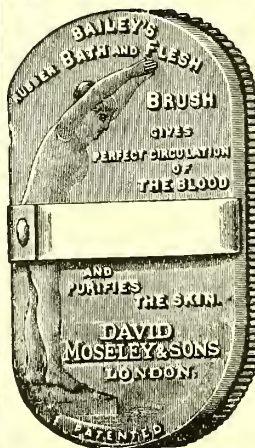
Compare price to other makes, and you will send your orders for

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From any Wholesale House in London; failing this write direct to

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Should be stocked by every Chemist and Dealer in Toilet Goods.

They are extensively advertised, have a ready sale, and show you a good profit.

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Bailey's Rubber Bath Brushes	... 42/- doz.	... 5/- each	
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WHOLESALE ONLY from

D. MOSELEY & SONS, 14 Aldermanbury Avenue, LONDON;
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The Two Most Fashionable Perfumes.

MÜLHENS'
RHINE VIOLETS

COMMANDS
A
QUICK SALE.

3/-, 3/6, 5/6,
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per bottle.

Rhine Violet
Sachets,
2/6 each.

Rhine Violet
Soap,
2/6 per tablet,
or 7/- per box
of tablets.



LEAVES A
GOOD
PROFIT.



STOCKED BY ALL THE LEADING
WHOLESALE HOUSES.

Wholesale and Export Houses are
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STRONGEST
AND MOST
LASTING.



COMMANDS A
HIGHER
RETAIL PRICE
THAN ANY
OTHER.

SOLD IN ALL
THE
USUAL SIZES.

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COMPOUND PERFUMES for SOAPMAKERS.**

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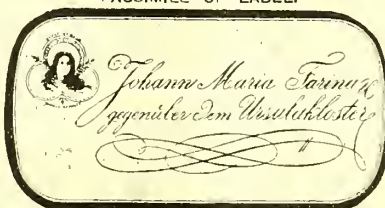
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MANUFACTURED by a DESCENDANT of the ORIGINAL INVENTOR.

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EXCELLENT QUALITY.

Insist on the
URSULA KLOSTER BRAND.



In 2-oz. and 4-oz. Bottles,
also in
½-pint, 1-pint, and 2-pint
Wicker Bottles.

TO BE OBTAINED OF ALL LEADING WHOLESALE HOUSES, OR OF
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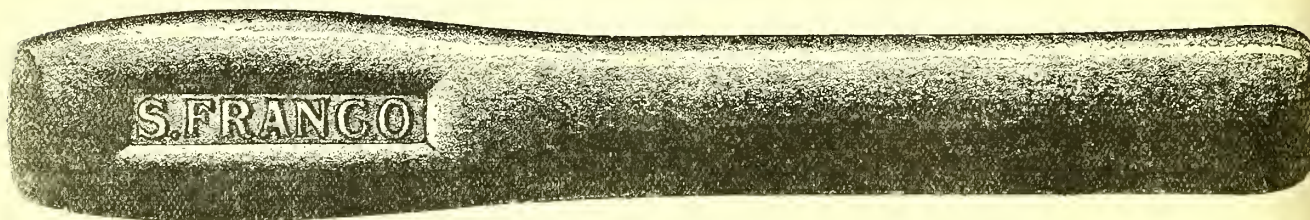
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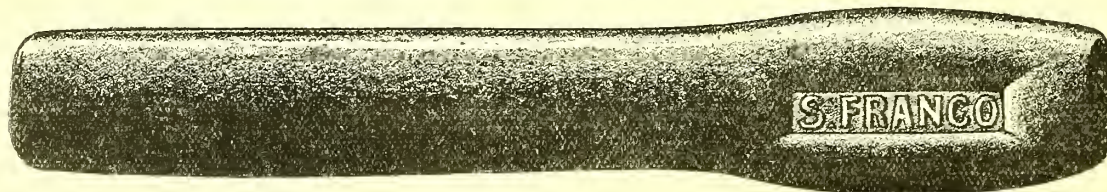
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[3]

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[4]



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WORCESTER, READING, HARVIE, YORKSHIRE, AND "BOROUGH" KETCHUP.

SILVER MEDAL.

		Per gross.	Extra quality.			Per gross.	Extra quality.
1d. Sample Bottles, dozen parcels	.. ..	5/3	.. 6/3	1/2 Bottles, flat or round, reputed half-pints	..	18/-	.. 28/-
" " 1-gross boxes	.. ..	5/9	.. 6/9	" " " pints	..	28/-	.. 38/-
1d. Giant " dozen parcels	.. ..	6/-	.. 8/6	1 Pint "Imperial", round stoppered bottles	..	52/-	.. 62/-
" " 1-gross boxes	.. ..	6/8	.. 9/-	12 1/2-Gallon Casks (casks free)	.. .. each	20/-	.. 32/-

ROYAL CAFE SAUCE, a Rich Fruity and Exquisite Flavour.

Square Glass Stoppered Bottles, containing nearly 1-pint Imperial, 42/- per gross. Sample Bottles at 7/- per gross.

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CHIEF SCOTCH AGENCY — West Nile Street, GLASGOW.

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What it is!

BOVRIL is Beef, the entire lean of the Best Beef procurable. Not the Forty Pounds Weight of Beef which would have to be eaten before the nourishment contained in One Pound of Bovril could be imparted to the system, but Forty Pounds of the primeest parts obtained from the finest selected Cattle reared in Australia and South America, concentrated by a special process, rendering it the most perfect form of strengthening, stimulating, easily digestible nourishment in the smallest possible bulk.

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Is specially prepared for use in the Sick Room. It is put up in porcelain jars and sold by Chemists and Druggists only; and it differs from ordinary Bovril in being more concentrated and quite devoid of seasoning, and is relished and retained by Invalids when ordinary food and stimulants are rejected.

BOVRIL, LTD., Food Specialists, LONDON.

Chairman—RT. HON. LORD PLAYFAIR, K.C.B., LL.D.

ADAMS'S EXTRACT

FOR

HERB BEER

QUALITY AND FLAVOUR UNIQUE.

Certificate of Analysis from GRANVILLE H.
SHARPE, F.C.S.

I have submitted to a very careful analysis a sample of ADAMS'S EXTRACT OF HERBS and find it be a highly concentrated preparation composed of judiciously selected herbs in combination with hops, and in the manufacture of which much skill and scientific judgment have been exercised.

It contains in an admirable and attractive form valuable tonic, stomachic, and dietetic properties, and there is an entire absence of undesirable admixture in any form.

It should prove a valuable acquisition in the world of non-intoxicating drinks, as when used according to directions it produces a beverage of high merit, refreshing and palatable to the taste and wholesome and invigorating to the system.

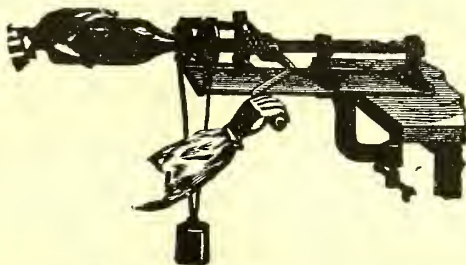
PROPRIETOR—

B. ADAMS, MANSFIELD

When applying for quotations please state approximate requirements in Bulk or Packed.

NEW CAPSULING MACHINE

**The only Machine
which leaves no crease
or pleat on the
Capsule.** [1]



Can be fixed to any Counter.
A single pull of the lever is sufficient to fix the Capsule.

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PEPTONISED MILK AND COFFEE (Concentrated).

This new preparation of Coffee with Peptonised Milk supplies a largely felt want in the case of Invalids and delicate people. It is a most valuable addition to the condensed peptonised milk foods which have met with such complete approval from the Medical Profession.

PEPTONISED MILK (Concentrated).

PEPTONISED COCOA AND MILK (Concentrated).

All the above preparations are sold in tins at **1s. 6d.** and **2s. 6d.**, and are obtainable everywhere.

SAVORY & MOORE, 143 NEW BOND STREET, LONDON.

Chemists to the Queen and H.R.H. the Prince of Wales.

van Houten's Cocoa

The "LANCET" says:—"Pure and unmlxed." "Delicate aroma."
"Really cheaper to use."

OVER 200 GOLD MEDALS AND DIPLOMAS.

FRY'S Pure Concentrated COCOA

Try also FRY'S MALTED COCOA,
a delicious combination of
FRY'S PURE COCOA AND MALT EXTRACT
(Allen & Hanburys').

SEASONABLE ARTICLES

All these articles are popular summer beverages, and are put up in suitable bottles attractively finished off.

LIME JUICE CORDIAL AND LEMON SQUASH.

Reputed Pints, per doz.—CORDIAL, 4/3.	LEMON SQUASH, 4/3.
Quarts, " " 6/9	" " 6/9
Per Gallon .. " 2/-	" " 2/-

Also in Flat Flasks, Square Stoppered Bottles, and Handsome Decanters.

PURE WEST INDIA LIME JUICE (Filtered Bright). Per gall, 2/6.

GRANULAR EFFERVESCENT CITRATE OF MAGNESIA. Per cwt., 66/- and 74/-. Also in small Bottles.

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Prepared under the superintendence of a duly qualified Analytical Chemist.
FULL PRICE LIST (ILLUSTRATED) ON APPLICATION.

CHAS. SOUTHWELL & CO., Dockhead, LONDON, S.E.



TOWER TEA.

The Best and the Cheapest in the World at the Price.

In $\frac{1}{4}$, $\frac{1}{2}$, and 1-lb. Packets only, to Retail at 1/-, 1/2, 1/4, 1/8, 1/7, 1/8, 1/10, 2/-, 2/4, 2/8 per lb. Also in Handsome 1-lb., 3-lb., and 5-lb. Decorated Tins, to Retail at 1/10, 2/-, and 2/4 per lb.

Agents appointed by

TOWER TEA, LIMITED, 5 JEWRY STREET, LONDON, E.C.



DR. TIBBLES' VI-Cocoa

THE WHOLESALE PRICE.

RETAIL PRICE.

PER DOZEN.

6d. Packets (Two Dozen in a box)	5/-
9d. Tins (Two Dozen in a box)	7/6
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5 per cent. Discount on Orders up to £5.

7½ per cent. Discount on Orders for £5 and upwards.

Terms—Cash within 7 days.

Carriage Paid on Orders value £2 and upwards.

N.B.—The above Discounts are from 3¼ to 6¼ per cent. better than can be obtained from any other source, whilst the merits of DR. TIBBLES' VI-COCOA are far greater than any other similar preparation in the world.

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The Proprietors hereby give notice to the Trade that the limit of "cutting" prices of DR. TIBBLES' VI-COCOA has been fixed as under:—

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9d. Tins ,, ,, not less ,, 8½d.

1/6 Tins ,, ,, not less ,, 1/4½

Full Prices to be obtained wherever possible.

FURTHERMORE,

Any Chemist, Grocer, or Stores cutting below these prices will be refused supplies direct from ourselves. And in this connection it is important to note that in £5 lots and upwards no trader in the kingdom, "Wholesale or Retail," can obtain more than the 7½ per cent. discount we offer.

Furthermore, as we pay carriage on orders value £2 and upwards, it will not be possible to obtain the advantage of this concession, nor that of the exceptional discounts we offer, unless our ruling as to the "cutting" of price is complied with.

Read the foregoing, send your order to



DR. TIBBLES' VI-Cocoa Ltd.,

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And obtain your fair share of the profits that are daily being made by our customers everywhere.

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Chemists' and General Printers, &c.,

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DIRECT ATTENTION TO THEIR

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- DOES IT PAY TO DO ANY OF THESE THINGS WHEN TIME AND MONEY CAN BE SAVED AND INCREASED EFFICIENCY BE ASSURED BY NOT DOING THEM ?

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- It pays to produce circulars the same size as "THE CHEMIST AND DRUGGIST" because the Winter and Summer Issues are distributed on the best selection of Members of the Trade.
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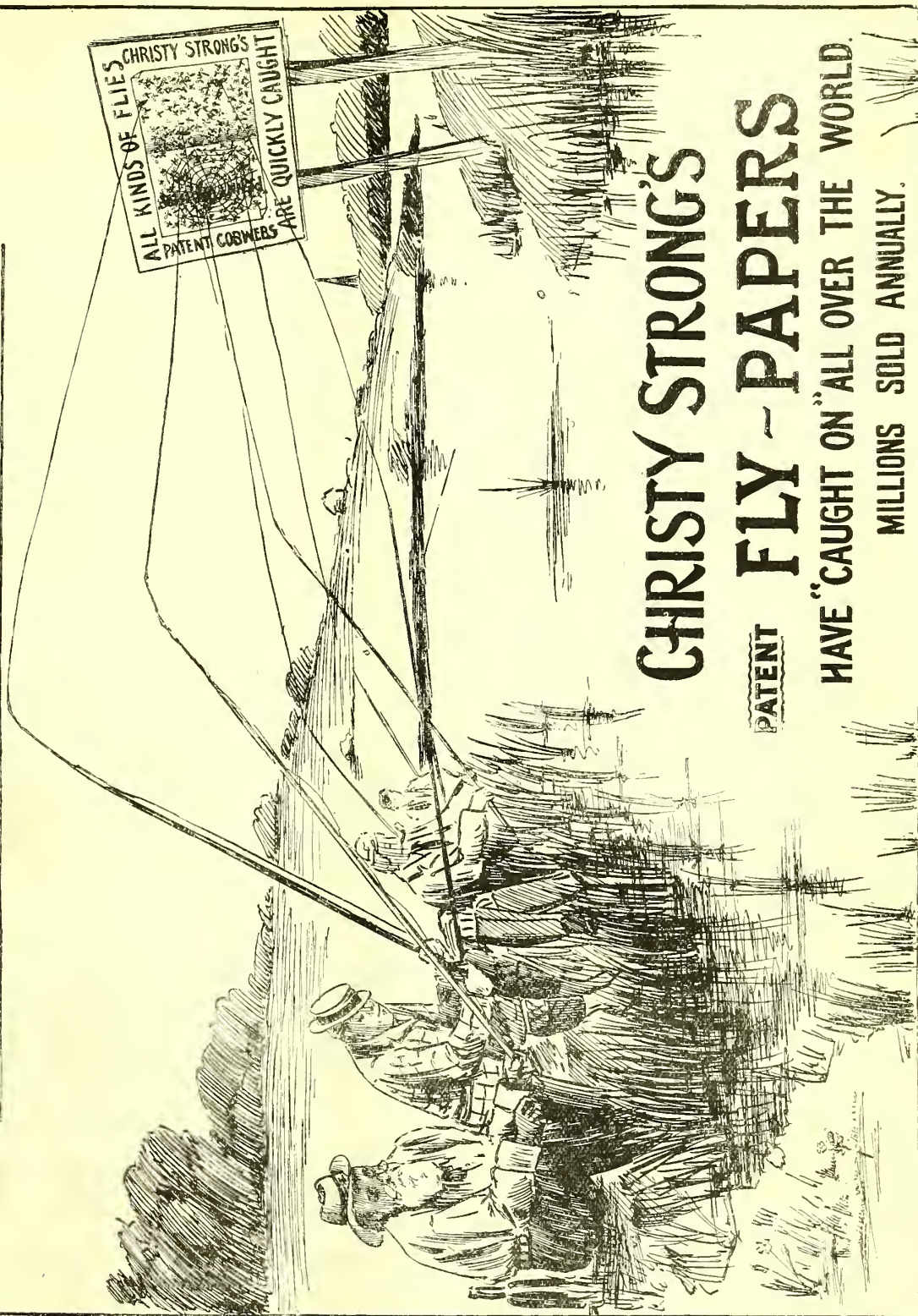
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Without manufacturer's name.

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Entirely different from any other Beetle or Flea Powder.

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pest.

Its effect upon
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simply
marvellous.

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Sold in 3d., 6d., & 1s. Tins.

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Manufacturers of the "World-Famed FLY CEMETERY."

TO PREVENT DISAPPOINTMENT, ORDER EARLY.

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The Original and by far the Best Sticky Fly
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fresh goods free of cost.

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They are the Cleanest,
Stickiest, and Best Fly
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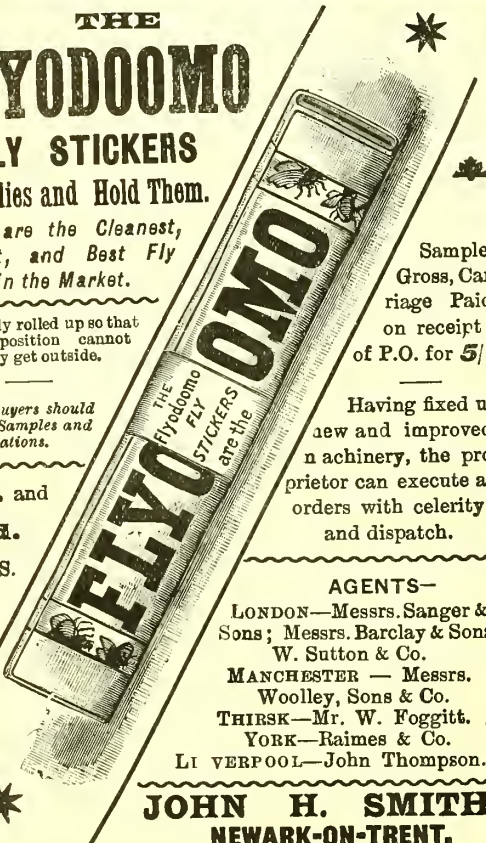
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Large Buyers should
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1/4d. and

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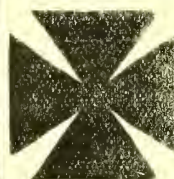
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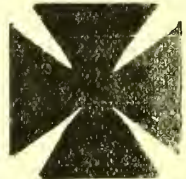
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8/- per Gross.

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A combination of Camphor, Eucalyptus, and
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SOLD BY THE PRINCIPAL DRUG AND SUNDRY HOUSES.

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AIRTIGHT, ODOURLESS, WATERPROOF PACKETS

Retains the Chlorine and keeps the Powder dry longer
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4 oz., 8/- gross; 8 oz., 16/- gross; 16 oz., 30/- gross.

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Samples on application.

Manufactured only by

W. C. HEBDEN, Albany Works,
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THE ONLY "REEL COMFORT."

1d.
EACH.

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EACH.

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IS NOT OFFENSIVE TO THE SIGHT.

CATCHES MORE FLIES THAN STICKY PAPERS.

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A GIGANTIC SUCCESS!
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if desired.

ORDER AT ONCE.

1 gross .. 7/- net.
5 gross at 6/9 ..
10 gross, at 6 6 ..

Sent Carriage Paid on
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FREDDIE.—"Oh! Papa, you should see those in the kitchen; there's thousands on!"

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INSECT POWDER FROM CLOSED FLOWERS.

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Specially adapted for Folded Cloths, closely-packed articles, &c. 1s. per box.

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For placing in Wardrobes, Chests, Cupboards, &c. 1s. per box.

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For scattering under Carpets, into Crevices, amongst Furniture, &c. 1s. per tin.

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STAVESACRE SEEDS. Own Import. We offer the Seeds whole or ground (own grinding).
CARBOLIC ACID, PALE LIQUID, 97%.

Having favourable contracts can offer to advantage in quantity.

Special Quotations on application. For lowest prices quantities should be stated.

W. KEMP & SON, Wholesale Druggists, HORNCastle.

CHLORIDE OF LIME!
IN AIRTIGHT, WATERPROOF & ODOURLESS PACKAGES.

SILVER I.H.E. MEDAL 1884.

TRADE MARK.

NATIONAL CHEMICAL CO.
CHLORIDE OF LIME CO.

LIST OF PRICES

24 lb. Box	1. 7b.	6/6
24 lb. "	1/2 lb.	7/-
24 lb. "	1/4 lb.	8/-
24 lb. "	ASSORTED 1 lb. 1/2 lb. 1/4 lb.	7/3
24 lb. "	1 CROSS 1 lb.	8/-

N.C. Co. INVENTORS AND SOLE MAKERS
BEWARE OF IMITATIONS

TO BE HAD FROM ALL WHOLESALE DRUGGISTS!
NATIONAL CHEMICAL CO. LONDON.

"THE ONLY GENUINE"
GOVERNMENT DISINFECTANT

CHEAPEST AND BEST
CARBOLIC POWDER
IN DECORATED TINS PER GROSS
PRICES.
GREEN 15% 6" SIZE 45/-
& BLACK 1/2 " 90/-
BLACK 6" SIZE 1 lb. 40/-
& GOLD 1/2 " 2 lb. 60/-
ALSO IN CASKS & PACKAGES
FLUIDS, ACIDS, SOAPS ETC.

TO BE HAD FROM
ALL WHOLESALE DRUGGISTS

THE GOVERNMENT SANITARY CO. LONDON

THE GOVERNMENT DISINFECTANT
CARBOLIC POWDER
USED BY
H. MAJESTY'S GOVERNMENT
TRADE MARK
THE BEST & CHEAPEST
CARBOLIC DISINFECTANT
LONDON S.E.

SUPPLIED TO HER MAJESTY'S GOVERNMENT.

IZAL PREPARATIONS. IZAL

Antiseptic. Non-Poisonous. Non-Irritating.

IZAL is an emulsion of Izal Oil. Mixed with 200 parts of water it gives an antiseptic lotion which is non-irritating, non-poisonous, and very much more powerful and persistent in its action than pure Carbolic Acid on account of the insolubility and low volatilisation point of the Oil.

IZAL has now been in use in several of the large hospitals for 2 or 3 years, and all that is claimed for it has been amply confirmed.

Bacteriological research by eminent specialists, whose reports will be forwarded on application to Messrs. Newton, Chambers & Co., has shown the certainty and speed with which IZAL destroys even the most resistant of Bacteria.

As a general disinfectant, for economy and pleasantness, IZAL is second to none; and its persistent and non-poisonous properties have already rendered it invaluable in the cleansing of Bakehouses.

IZAL for medical use is indicated as an internal antiseptic, and should be employed in Typhoid Fever and specific diseases, since it has been shown that, although itself non-poisonous, IZAL has the power of destroying the effect of the noxious alkaloidal products of Bacteria.

IZAL should be employed in Phthisis not only as a disinfectant, but also medicinally, with a view of combating the micro-organism in the tissues, and arresting the disease.

IZAL is prepared for a variety of purposes, as:—

IZAL Emulsion for Disinfecting purposes
6d., 1/-, 2/6, and 4/6 per bottle.

IZAL Emulsion for Surgical and Internal Administration 1/6 & 2/6 per bottle.

IZAL Cream, in Tubes ... 1/1½ tube.

IZAL Soap, in 1-lb. or 3-lb. bars ... 3d. per lb.

IZAL Medical Soap, 8 tabs. in box ... 2/- per box.

IZAL Toilet Soap, 3 tabs. in box ... 1/3 per box.

IZAL OINTMENT is *par excellence* the antiseptic application of the future. It is cooling and antipruritic, as well as antiseptic.

In skin diseases it is invaluable, for there is hardly a case of skin disease, as a well-known specialist recently remarked, in which at some period or another of its course, antiseptic and antiparasitic remedies are not indicated.

On account of its great persistence, it is especially useful in killing the resistant fungi of ringworm, favus, pityriasis versicolor, &c., and the parasites (pediculi, acarus, &c.).

IZAL Lint, Izal Gauze, and Wool are now prepared and put up, as it has been found how well wounds heal under the continued stimulating and antiseptic influence of IZAL.

IZAL SOAP, Medical and Toilet, contains a sufficient percentage of IZAL to render a remedy so persistent in its action of practical use in keeping the hands and body surgically pure—unlike carbolic soap, the action is not evanescent.

Every surgeon, accoucheur, and nurse should make a habit of always using IZAL soap.

IZAL TOOTH POWDER is a delicate, pleasant, and elegant preparation, and forms an admirable antiseptic for the mouth and teeth. Much of the early decay, produced by acid forming bacteria, might be arrested if IZAL were regularly employed.

IZAL CREAM is essentially a toilet preparation for the purifying, clearing, and softening of the skin, and is especially indicated in acne and pustular eruptions about the face.

IZAL Lint 2/4, Cotton Wool 2/- per lb.

Gauze 1/- per 6-yard length.

(To be had from the Maker, JOHN MILNE, Antiseptic Dressing Factory Ladywell, London.)

IZAL Lozenges ... 1/1½ per box.

IZAL Ointment ... 1/1½ per jar.

IZAL Tooth Powder ... 6d. and 1/- per box.

IZAL Embrocation ... 1/1½ per bottle.

NEWTON, CHAMBERS & CO., Lim., Thorncliffe, Sheffield.

Liverpool Depot—50A LORD STREET, LIVERPOOL.

To be obtained through the Wholesale Patent Medicine Houses, or of

ALLEN & HANBURYS Ltd., Bethnal Green, LONDON, E.

THE ART OF ADVERTISING

A popular American writer, not Benjamin Franklin, under the heading "The Road to Wealth," writes as follows:—

"Early to bed and early to rise,
Never get drunk, and advertise."

Now, as a matter of fact, we have personally known many people who have got pretty far on the road to wealth without either getting up with the cheerful lark or going to bed before the small hours, and, with all due deference to Sir Wilfrid Lawson, and without for one moment suggesting that our friends should do likewise, have known many who have been in the habit of dining not wisely but too well and yet have been eminently successful. But few, very few, have built up solid, lucrative businesses without Advertising. This, practically, is an admitted fact, the difficulty comes in how, when, and where to advertise in order to obtain the biggest possible result with the least outlay. At present the three popular forms of appealing to the public are **Newspapers, Placards, and Counterbills**.

NEWSPAPERS for a Beecham, a Pears, a Holloway, or anybody with unlimited capital to keep it up, is undeniably a paying game, but for a man with small means to appear now and again at long intervals before the public is worse than useless. It is just like sowing a handful of wheat in one's back garden with a view to reaping a harvest.

PLACARDS—well, our towns, villages, and even fields are becoming so hideous with hoardings that we sincerely hope our advertising friends will not add to their number; and, apart from this, this form of Advertising, in order to be successful, requires more careful watching than the ordinary business man has time to devote to.

As for **COUNTER BILLS**, these are more often than not thrown away without being read, or, if glanced through, are forgotten within five minutes. To our mind an Advertisement to be successful should be pleasing, permanent, and constantly in evidence; and after devoting many years to this branch of the art (for Advertising is an Art), we maintain that a deliciously perfumed **Sachet** fulfils the three conditions mentioned. There is no doubt about a **Sachet** being constantly in evidence. A Lady (and it goes without saying that Ladies are far and away the best customers of the trade) is charmed to receive from her Chemist a **Sachet**; she keeps it always before her either in her Work-bag, Glove-box, Handkerchief-case, Writing-desk, or, better still, uses it as a Bookmarker for the book she is reading, and, in short, would rather part with anything than her **Sachet**.



Fig. 1.

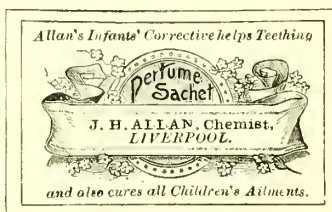


Fig. 2.



Fig. 3.

The above illustrations represent three lines for which we are having a big run just now.

Figs. 1 and 3 are full size **6d. Sachets** (equal in strength to many retailed at **1s.**), and, being very highly perfumed and packed in attractive glass-top counter-cases, sell well at **6d.** and move off very rapidly at **4½d.**; but what we suggest is that our friends should go in for a gross with their own name and address on and give away free to their best customers.

We venture to state in no other way would two guineas produce so good an impression.

Sachet Fig. 2 is a smaller one, and lends itself admirably to the name and address of the Chemist and a little matter, drawing attention to any Proprietary Article, to the fact that "Dispensing is carried on under personal supervision," that "Surgical Appliances are made a speciality of," that "Teeth are extracted with or without pain," and, in short, anything to which a Chemist may wish to call special attention; and, moreover, one of these **Sachets** if enclosed with the little quarterly bill helps very much to sweeten it. All above **Sachets** can be supplied printed in either English, French, German, Spanish, Portuguese, or any other language.

PRICES.—(Fig. 1.) **4s per dozen, 42s. per gross**, minimum quantity with Chemist's own name **1 gross**; (Fig. 3) **4s. per dozen, 42s. per gross**, minimum quantity with Chemist's own name **3½ gross**; (Fig. 2.) **250 for £1 12s., 500 for £2 15s., 1,000 for £5, 5,000 for £16**, minimum quantity **250**.

Sample Set of Advertising Sachets post free to any part of the United Kingdom for **12 stamps**, or to any part of the world for **24 stamps**.

AYRTON & SAUNDERS, MANUFACTURING PERFUMERS, LIVERPOOL.

SYR. HYPOPHOS. CO., FELLOWS

CONTAINS THE ESSENTIAL ELEMENTS of the Animal Organisation—Potash and Lime;

THE OXIDISING AGENTS—Iron and Manganese;

THE TONICS—Quinine and Strychnine;

AND THE VITALISING CONSTITUENT—Phosphorus: the whole combined in the form of a Syrup with a **SLIGHTLY ALKALINE REACTION**.

IT DIFFERS IN ITS EFFECTS FROM ALL ANALOGOUS PREPARATIONS, and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

IT HAS GAINED A WIDE REPUTATION, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

ITS CURATIVE POWER is largely attributable to its stimulant, tonic, and nutritive properties, by means of which the energy of the system is recruited.

ITS ACTION IS PROMPT; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; *hence the preparation is of great value in the treatment of mental and nervous affections.* From the fact also that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

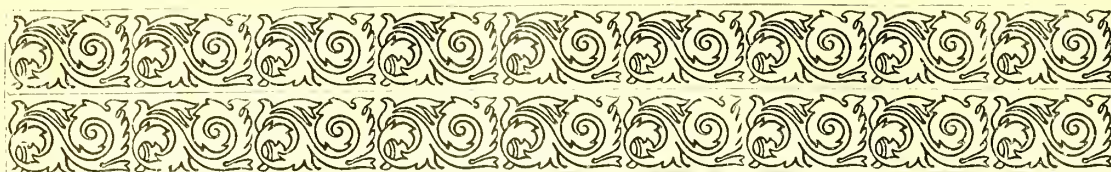
NOTICE - CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, **FINDS THAT NO TWO OF THEM ARE IDENTICAL**, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, **IN THE PROPERTY OF RETAINING THE STRYCHNINE IN SOLUTION**, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. **FELLOWS**."

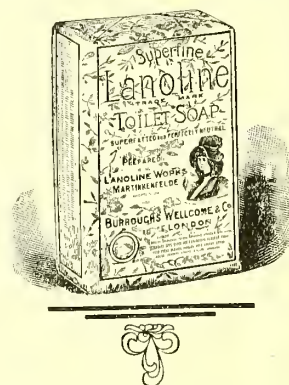
As a further precaution, it is advisable that the Syrup should be ordered in the original bottles (4/- or 7/-); the distinguishing marks which the bottles (and the wrappers surrounding them) bear can then be examined, and the genuineness—or otherwise—of the contents thereby proved.

THE FELLOWS MEDICAL MANUFACTURING CO., LIMITED,
94 PAUL STREET, FINSBURY, LONDON, E.C.



'Lanoline'

Preparations.



Toilet 'Lanoline'

Is prepared from the purified fat of lamb's wool, which is similar to the



natural fat of the human skin and therefore forms an effective, soothing and protective application for roughness, sunburn, chaps, cuts, burns, eruptions, and all

forms of sensitive skin. Toilet 'Lanoline' is supplied in large and small collapsible tubes at 4s. 6d. and 9s. per dozen.

'Lanoline' Toilet Soap

Is a perfectly neutral soap superfatted with 'Lanoline.' It is admirably suited for ladies' and children's use. 'Lanoline' Toilet Soap is now issued in one size only, to retail at 6d., put up in boxes containing three tablets. The tablets are more elegant in appearance and larger than hitherto. 'Lanoline' Toilet Soap is supplied at 4s. 6d. per doz. tablets.



Burroughs Wellcome & Co., Snow Hill Buildings, LONDON.

Australasian Address:—108, Pitt Street, SYDNEY, N.S.W.

Cable and Telegraphic Address:—"BURCOME, LONDON."

'Kepler' Products



"We can recommend the 'Kepler' Extract of Malt. . . Its qualities are not deteriorated nor its flavour spoiled. It is very favourably spoken of by physicians both in respect to its nutritive and digestive qualities and as being of very agreeable flavour."

British Medical Journal.

SMALL AND LARGE BOTTLES,
20S. AND 36S. PER DOZEN.

'Kepler' Malt Extract has always retained its superiority because it is the uniform product of the finest winter-malted barley. No inferior cereals are used, and a special process ensures a full percentage of diastase. As a food and as a digester of foods 'Kepler' Malt Extract is unrivalled. . .

'Kepler' Solution enables even those with the most sensitive and most delicate digestive organs not only to take cod liver oil readily, but also to assimilate it. It is a molecular incorporation of the finest Norwegian Cod Liver Oil with 'Kepler' Malt Extract, and tastes like sweet cream.

"A great advance on anything hitherto attempted in this direction. . . The taste of the oil is agreeably disguised, its nutritive qualities are greatly increased, and it is rendered easy of digestion."

—British Medical Journal.

SMALL AND LARGE BOTTLES,
20S. AND 36S. PER DOZEN.

Burroughs, Wellcome & Co., LONDON and SYDNEY.

Vinolia

A Plastic
Emollient Cream
for
ITCHING,
FACE SPOTS,
ECZEMA.

Retail Price, 1/11, 1/9, 3/6, and 6/-.

Trade Price, 10/8, 16/9, 33/4, and 57/8 per dozen boxes (less usual discounts).

BLONDEAU ET CIE., MALDEN CRESCENT, LONDON, N.W.

Telegrams—
"UMNEY LONDON."

Telephone—
4608 (Hop Exchange).

TRADE NOTICE.

WRIGHT'S COAL TAR SOAP

On July 1st, 1897, the "FACE VALUE" will
be printed and advertised as

FOURPENCE (4d.) PER TABLET—BOXES (3 TABLETS) 1s.

TRADE PRICES, DISCOUNT, TERMS, WILL NOT BE CHANGED.

*Full particulars of Coal Tar Specialities on application to
the Manufacturers and Proprietors—*

**WRIGHT, LAYMAN & UMNEY,
SOUTHWARK, LONDON.**



ESTABLISHED 1859.

Subscription: Fourpence a Week, Ten Shillings a Year.
Summer and Winter Numbers, 1s. per Copy.

CHIEF OFFICES: 42 CANNON STREET, LONDON, E.C.

BRANCH OFFICES: 231 ELIZABETH STREET, MELBOURNE,
AND 114A PITT STREET, SYDNEY.

THIS JOURNAL is regularly supplied by subscription to the
whole of the Members of TWELVE PHARMACEUTICAL
SOCIETIES in the British Empire.

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OUR OFFICES

will be closed on the Diamond Jubilee day.

POSTCARD COMPETITION.

What we ask our subscribers and their employés to do in June is to write on a postcard and send to us an account of some exceptional experience they have had in business—a bad quarter of an hour, we put it last week. Such things as cows come into chemists' shops, and there are awkward customers amongst men and women, while the chemist himself sometimes gets into a predicament. It would be interesting to hear of all these things. Relate each one on a postcard.

OUR SUMMER NUMBER.

On July 31 we shall publish our Annual Summer Number. It will exhibit an entirely new departure in trade journalism in that the whole of the cover will be printed by a photographic process which so far is the highest expression to which

COLOUR-PHOTOGRAPHY

has reached. The composition of the cover has been designed to give a complete representation of the possibilities of the primary colour-printing process, both still-life objects and artists' colour pictures being incorporated in it. We understand that a piece of work of this kind of the same magnitude has not been attempted in this country before. The Number will, therefore, be a valued souvenir, and, as such, an exceptionally good one for advertising in.



CANADIAN druggists have adopted the P.A.T.A. scheme (p. 942).

A MAN in Chester drank $\frac{1}{2}$ lb. of chloroform and died (p. 933).

BIRMINGHAM drugs are now under official inspection (p. 939).

THE yellow-fever microbe has been discovered by a South American physician (p. 952).

A SERIES of articles is included in this issue regarding drug-trade events during the Queen's reign (p. 954).

MR. CROOKES tried to make diamonds at the Royal Institution last week, but his furnace burst (p. 939).

THE anisoline patents are now the subject of a lawsuit between Badische Fabrik and the Rhone Company (p. 944).

MR. GWILYM EVANS will be the Liberal candidate for the Llanelly district at the next Parliamentary contest (p. 941).

A FRENCH investigator advances the startling theory that every species of plants has its own peculiar chlorophyll (p. 942).

AT Preston this week an unqualified chemist was ordered to pay 15*l.* and costs for an infringement of the Pharmacy Act (p. 944).

THE Comptroller-General of Trade-marks informs us that he gives free advice in respect to whether a trade-mark is registrable or not (p. 951).

PROFESSOR C. R. FRESSENIUS, of Wiesbaden, died last week. A brief obituary notice and a portrait of the eminent chemist are printed on p. 978.

MR. CHANEY, of the Board of Trade, states in a letter printed on p. 982 that such terms as Winchester quart, &c., really refer to bottles, and not to standard measures.

DR. OSCAR LIEBREICH has before the Medical Congress at Berlin combated Koch's views in regard to the treatment of phthisis, and contested the bacilliary views of its origin (p. 952).

THE text of the loyal address presented by the Pharmaceutical Council to the Queen is printed on p. 940, and the views of a cartoonist and a poet on the subject are printed on p. 984.

AN INTERNATIONAL CONGRESS on technical education was opened in London on Tuesday by the Duke of Devonshire. A number of important papers were read bearing upon British chemical industry (p. 943).

MR. SEYLER, the Glamorganshire analyst, has continued his interesting investigations on the quality of tinctures supplied by chemists in his district, and we give on p. 941 an abstract of his analytical results.

THE Judges of the Scotch Justiciary Appeal Court have decided that the use of signboard and doorplate having such descriptions as "American dentistry" and "Dental office" by an unregistered dentist is not an infringement of the Dentists Act (p. 943).

MR. GLYN-JONES's courtship of the grocers has suggested an interview with him, in which he expresses his views on the subject. This is dealt with on p. 942, along with brief reports of a large number of grocers' meetings at which the P.A.T.A. objects were supported or condemned.

PARTICULARS are given in our report of the Society of Chemical Industry of the annual meeting to be held in Manchester next month. We there also deal with a meeting of the London section held on Monday evening, when there was an amusing fence between Dr. Dupré and Dr. Attfield regarding the combustibility of barium peroxide (p. 946).



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of not more than three salts. The mixture is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a stamped and addressed envelope, not a stamp merely) will be received up to Wednesday, June 23, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, July 3. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

The report of the last competition will be printed next week.



Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

For Botanists.

A botanical research scholarship, open to past and present students of the University College, Bristol, has been founded, and will be offered for competition next week.

Alleged Dishonesty.

Joseph Parott (19), apprentice to Councillor John Wharton, chemist, Freeman Street, Grimsby, was charged at the local police court last week with stealing 2s. from his employer. Detective-inspector Scott stated that pilfering had been going on in the shop for some time, and he thought he had brought the matter home to the prisoner. He alleged that accused stole 4s. on May 24, and 2s., which he should have put in the till, on June 4. The prisoner was remanded until Monday, when Mr. Wharton stated that Parott was within a few months of completing his indentures. In pleading guilty to the charge on behalf of the prisoner, Mr. Hutchins urged leniency on the ground that he was very respectably connected, and had become the victim of gambling and card-playing. Parott, who seemed to feel his position keenly, was committed for two months' with hard labour.

Suicide with Chloroform.

Fatalities by the internal administration of chloroform are rare. Last week a man of 23, staying at a Chester hotel, drank nearly the whole of the contents of an original $\frac{1}{2}$ -lb. bottle of the anæsthetic, and died. Deceased was comatose when Dr. Taylor was called in. The doctor succeeded in

restoring him to consciousness, but the heart's energy was quite sapped, and the man died.

Western Chemists' Association of London.

Wednesday, July 21, is the day fixed for the river excursion. The party will leave Paddington Station at 9.58 A.M. for Taplow, and at Maidenhead Bridge will embark on a launch for Great Marlow, passing Cliveden Woods, Formosa Island, the Quarry Woods, &c., stopping at the Compleat Anglers for dinner at 2.30 P.M., and returning to Taplow in the evening, thence back by train to Paddington. Tickets, 17s. 6d. each, which will include return railway-fare, refreshments on launch, and dinner at Great Marlow (exclusive of wine, &c.), may be obtained from Mr. Herbert Cracknell, 17 Craven Road, W. Those who think of going should let him know not later than Monday, June 21.

Hirschfeld Charged with Fraud.

Napoleon Hirschfeld (50), specialist in rheumatism, whose affairs in bankruptcy were recently reported in this journal, appeared at Bow Street on June 11, charged with fraud under the Bankruptcy Act. It was intimated that the Treasury would take up the prosecution, and after some formal evidence Hirschfeld was remanded.

Fires.

On Thursday of last week Mr. H. T. Hyslop, chemist and druggist, Walmersby Road, Bury, had the storeroom behind his premises rather severely damaged by a fire. He was fumigating the store with sulphur to get rid of a pest of fleas, and the burning brimstone set fire to the place. Damage, 150l., covered by insurance.

There was a serious fire on the same day at the chemical works of Messrs. Ellison & Mitchell (Limited), Swinton. It is supposed that one of the stills, containing 1,000 gallons of "soda" had become overheated, with the result that the exhaust-pipe spread the fluid from the still, and, dropping upon hot ashes, the fire very rapidly spread. A naphtha-still was close by, and several other stills containing equally inflammable liquid, besides abundant quantities of similar stuff in the neighbourhood. The fire was promptly tackled, with the result that what might have been a disastrous and fatal conflagration was quickly subdued.

Advertising Ideas.

Messrs. Walker & Harris, of Canterbury, have produced a very good "Jubilee National Anthem" which they print on cards with embossed flags and medallion portrait of the Queen. They do not print any business announcement on the card, but they distribute the card as an advertisement.

Messrs. Francis & Co., chemists, Wrexham, have distributed a neat handbill (round corners, violet ink), intimating that during Jubilee week they purpose presenting their lady clients with a deliciously-scented sachet as a souvenir of the Queen's record reign.

Boots (Limited) are now advertising a corn-cure in the following strain:—

A comfortable stand on Jubilee day. You will be able to take things comfortably and easily among the crowds at Jubilee time if you take our advice now. It is not worth while running the slightest risk of having your enjoyment spoiled by your corns when "Waukeezie" will cure them at once. Don't keep putting off putting on "Waukeezie." It is the best corn-cure known.

Mr. Lund, chemist and druggist, Lancaster, is also making a speciality of his corn-paint, advertising that "The halt, the lame, and even the blind may cure themselves" by using it.

Obtaining Poisons by False Statements.

Mr. Philip Griffiths, chemist and druggist, Shepton Mallet, was called upon to give evidence at an inquest held at Diteheat on Saturday, with respect to the suicide of a man named Barber. Mr. Griffiths stated that deceased was a customer of his, and came to the shop to purchase some arsenic, stating that it was for killing crows. He supplied deceased with 6d. worth, labelled it, and entered it in the poison-book, which deceased signed. Deceased went home and took the poison.

Midland Pharmaceutical Association.

The Council of this Association met at Mason College on Tuesday afternoon, and appointed the following officers:—President, Mr. J. F. Gibson, Wolverhampton (re-elected); Vice-Presidents, Mr. J. Poole and Mr. J. Barclay, B.Sc.; Hon. Treasurer, Mr. J. Mackenzie; Hon. Librarian, Mr. J. Barclay; Hon. Secretary, Mr. H. S. Shorthouse, F.C.S.

Drug Exhibits at Cattle Shows.

At the Essex Agricultural Show last week Messrs. Day, Son & Hewitt, Jeyes' Sanitary Compound Company, and Spratt's Patent exhibited their specialities.

At the Herefordshire and Worcestershire Agricultural Society's Show Messrs. Mousley & Sons, veterinary chemists, Redditch, had a stand of stock foods and medicines; Messrs. Day, Son & Hewitt, 22 Dorset Street, W., also exhibited, as well as Messrs. Thos. Pettifer & Co., Stephen Pettifer & Co., Day & Son (Crewe), Proctor & Ryland (Birmingham), and Mr. W. Heath, the last-named showing herbal strips for chest-affections.

A Doctor Stabs his Wife.

On Sunday, Mr. Bernard O'Connor, L.A.M.I., in practice as a physician and surgeon at Burnley, stabbed his wife in the region of the heart (according to her allegation), and himself took strychnine. The last accounts we have received are to the effect that both are in a precarious state. Mr. O'Connor is a practitioner of ten years' standing.

The Alleged Tooth-paste Fraud.

The case against Emil Hoffmann Merrick, Trentham Road, Longton, was again gone into at the Borough Police Court on Friday, June 11, when Mr. G. C. Kent prosecuted on behalf of the Treasury. Merrick advertised tooth-paste, to the purchasers of which he offered a number of bicycles to be won in a missing-number competition. A further remand was granted, prisoner being allowed bail, himself in 100*l.*, and two others in 50*l.* each.

Birmingham Drugs.

From the report of Dr. Alfred Hill, medical officer of health for Birmingham, for the first quarter of 1897, we learn that of 33 samples of drugs received during that period only 5 were found to be adulterated. In 4 samples of glycerine minute traces of arsenic were found. Four out of 6 samples of spirit of nitrous ether yielded from 5 to 7 volumes of nitric-oxide gas, but 2 were seriously deficient, yielding only 3½ volumes and 1 volume of gas respectively. One sample of tincture of rhubarb contained 16 per cent. of solid ingredients too little. Some weeks ago, as reported in the *C. & D.* at the time, medicines from various chemists were made up at the request of the Health Inspector and submitted to Dr. Hill for analysis. Since then no report has been issued, and our representative has been informed that in consequence of the delay at the Council House no proceedings will be taken, even if, on examination, the drugs proved to be adulterated.

Chemists at Cricket.

Burgoyne Burbidges C.C. last Saturday played Barron Harvey's C.C. The scores were:—B., B. & Co., 93; B., H. & Co., 73. For the victors, Ryley, 24, and Burghes, 21 not out, were top scorers, whilst Haldon batted well for the losers.

The Wolverhampton Chemists C.C. played Beattie's C.C. on Thursday, June 10. The Beattie lot were badly beaten, as they only totalled 22 against the Chemists 80. Barton's 27 for the Chemists was a splendid effort.

The Metropolitan College of Pharmacy C.C. played the Pharmaceutical C.C. at Wormholt Farm on Saturday, and scored 50 runs. The Pharmaceutical C.C. total was 22.

Annoying a Chemist Preacher.

On Sunday evening, Mr. David Dickinson, chemist and druggist, Chester, and other Wesleyan adherents commenced an open-air service on the Bowling Green Bank, when the congregation was run into by a Mr. Joseph Shaw, driving a trap. On Monday Mr. Shaw faced the Chester Police Magistrates, charged with a breach of the peace. Mr. Dickinson was the principal witness for the prosecution, and

described the accused's violence. After hearing both sides the Magistrates dismissed the case.

Mr. Crookes on Diamonds.

The last Friday evening lecture of the Royal Institution for this season was given last week by Mr. William Crookes on "Diamonds." The first part of the discourse followed the lines of the Imperial Institute lectures already reported in the *C. & D.* Speaking of the origin of diamonds, he said that, thanks to Professor Moissan, they could now be manufactured in the laboratory—minutely microscopic, it was true, but with crystalline form and appearance, colour, hardness, and action on light the same as the natural gem. The first necessity was to select pure iron and to pack it in a carbon crucible with pure charcoal from sugar. Mr. Crookes put ½ lb. of this iron into the body of the electric furnace, and a powerful arc, absorbing about 100 horse-power, formed close above it between carbon poles. The iron rapidly melted, he explained, and saturated itself with carbon. After a few minutes' heating to a temperature above 4,000° C., the current is stopped and the dazzling fiery crucible plunged in cold water until it cooled below a red heat. To obtain the diamond from the metallic ingot required a long and tedious process of treatment with various strong reagents, and the specimens thus obtained are only microscopic. The largest artificial diamond yet made was less than 1 millimetre across. Owing to cleavage of the furnace with which Mr. Crookes was working the Royal Institution audience were denied the pleasure of seeing the diamond-making experiment carried to completion.

Wanted to Die.

At Greenwich Police Court, on Wednesday, William Cosham (21), carpenter, of Theobald's Road, Holborn, was brought up on remand on the charge of threatening to commit suicide. The prisoner went into a chemist's shop in Nelson Street, Greenwich, and asked to be served with poison, threatening that if he were not supplied there he would get it elsewhere, or else drown himself. On the understanding that his father would look after him he was discharged.

Outings.

Last Friday was the day we selected for our annual outing, and when we got down to Broxbourne it was warm. The *C. & D.* men won the toss, and elected to bat; but they did not make much of it, the editor and subscription-clerk being the only ones who reached respectable figures. An assistant-editor stayed a long time at the wicket, and instructed a few colleagues how a certain bowler should be played; but he only managed to break his own egg. The *Ironmonger* have a new bowler who has a break to leg that deserves to be applied to a bicycle. Things looked cheery for the *C. & D.* when the *Ironmonger* got in, for three or four of their best men were out before a run had been made off the bat, all the figures having come from byes stolen when longstop was thinking of the Supplement or when leg was calculating how many insects he could get for the Summer number. In the long run the *Ironmonger* eleven secured a comfortable margin. The ladies played tennis, and the veterans bowls. There were also some pleasant boating-parties.

The annual outing of the staff and employés of Messrs. C. J. Hewlett & Son, Great Charlotte Street, E.C., was held on Saturday last, when a large party proceeded to Portsmouth. The morning was spent in visiting the dockyard and several of the battleships in the harbour. Dinner was served at the Royal Hotel, Mr. E. J. Millard occupying the chair. After the usual loyal toasts, the Chairman proposed "The Health and Prosperity of the Firm," and mentioned that Mr. C. J. Hewlett issued the first printed wholesale drug-list in 1837; previous to that the lists were printed with blank spaces for prices, which were filled in as required. He also advocated the formation of a cricket club, to join in the Inter-Drug Club contest now going on. Mr. E. J. Tucker, the manager, responded, and read a telegram conveying the good wishes of the firm, who, in a liberal manner, provide for these occasions. In the afternoon various boating and other excursions were arranged, a number crossing to Cowes, where tea was supplied. Splendid weather rendered the trip most enjoyable.

A Boots' Manager's Banking.

At the Bedford Quarter Sessions on Tuesday, June 15, Mr. Arthur John Conroy, chemist's manager, surrendered to his bail on a charge of embezzling about 90%, the moneys of his employers, Boots (Limited). The accused, who has been in a precarious state of health since his arrest at Ipswich, was brought into court on an invalid's couch, having recently undergone a painful operation. Mr. Attenborough, for the prosecution, said that the prisoner, while having sent to his employers weekly statements showing payments into the bank of 90% in respect of the Bedford business, of which he was formerly the manager, had not paid the money in. Mr. Fordham, for the defence, said that, the prisoner having rendered a proper account to his employers, the mere fact of his having failed to pay moneys into the bank did not constitute embezzlement, but must be regarded as a civil debt. The jury found a verdict of not guilty, and the prisoner was acquitted.

The Queen and the Pharmaceutical Society.

Subjoined is the text of the address which has been sent to the Home Secretary for presentation to the Queen:—

The Humble Address of the President, Vice-President, and Council of the Pharmaceutical Society of Great Britain.

To the Queen's Most Excellent Majesty.

May it please your Majesty,

We, the President, Vice-President, and Council of the Pharmaceutical Society of Great Britain, humbly approach your Majesty with feelings of heartfelt loyalty and devotion to tender our respectful congratulations on the occasion of the sixtieth anniversary of your Majesty's glorious reign.

The marvellous extension of the domains of science, as well as the encouragement and development of education in its widest sense, have been very marked features since your Majesty's accession, and we venture to express our opinion that in this general progress the art of pharmacy has had its share.

We recall with gratitude the many blessings vouchsafed to our country during your Majesty's long and beneficent reign. We respectfully recognise the enlightenment of your rule and the deep sympathy you have ever manifested with the joys and sorrows of your subjects, and we humbly pray that your Majesty may be long spared to reign over a happy, prosperous, and united Empire.

(Corporate Seal.)

WALTER HILLS, President.

G. T. W. NEWSHOLME, Vice-President.

ROBERT HAMPSON, Treasurer.

RICHARD BREMRIDGE, Secretary and Registrar.

Ladies' Night at the Royal.

A distinguished company attended the *conversazione* of the Royal Society at Burlington House on Wednesday evening, when there was, as usual, an exhibition of scientific curiosities, some of them remainders from the *soirée* held a month ago. One of the most novel exhibits was Lord Kelvin's electrical effects of uranium. Mr. A. Campbell Swinton performed a large number of *x*-ray experiments, and Professor Silvanus Thompson had similar experiments on cathode and analogous rays. Professor Ramsay exhibited tubes filled with argon and helium, arranged so as to form the words *Vivat Victoria Regina*. "Vivat" was in argon, with the ordinary alternating discharge (red); "Victoria" was in helium, with the ordinary alternating discharge (yellow); "Regina" was in argon, with a jar and spark-gap introduced in the circuit, giving a blue colour, owing to the appearance of many blue lines in the spectrum, invisible with the ordinary discharge. The contrivance was highly ingenious; each word is bent out of one tube. Professor Roberts Austen's photographs of artificial diamonds, which he has made by Moissan's method, were much admired.

Objected to the Father-in-Law.

At the High Court of Justice of Peel, last week, a petition was presented for the appointment of trustees under deed of arrangement executed by William Fergusson, chemist, Laxey. It was stated that the assets would amount to about 207*l.*, and claims 574*l.* Two gentlemen were mentioned as trustees, but some creditors objected to one of them, Mr. Curphy, the debtor's father-in-law. Mr. Cowin and Mr. J. C. Cain, lockman of Lonan, were appointed. July 6 was fixed for proof of claims.



Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Professor Ramsay Honoured.

At the Dublin University on Monday the honorary degree of D.Sc. was conferred upon Professor William Ramsay, of London University College, the discoverer of argon and helium.

July Pharmaceutical Examinations.

The last days for receiving applications will be as follows:—For the Preliminary examination, Monday, June 21; for the Pharmaceutical Assistants' examination, Monday, June 28; for the Registered Druggist examination, Tuesday, June 29; for the Pharmaceutical Licence examination, Wednesday, June 30. The forms of application can be obtained from Mr. Arthur T. Ferrall, Registrar, 67 Lower Mount Street, Dublin, and when filled up are to be sent to him with a receipt of the fee from the Bank of Ireland.

An Inquiry Asked for.

The question of the excessive cost of medicine in the North Dublin Union as compared with that of the South Dublin Union is at present agitating the Guardians of the former institution. As the North Union medical officer cannot explain, the Local Government Board has been asked to inquire into the matter.

Lecturing on a Kicking-ground.

"Professor" Shepherd, the Londonderry druggist, whose exploits in the Town Hall were recently noticed in the *C. & D.*, is about to publish a pamphlet, entitled "The Financial Relations *versus* England and Her Poor Relations," which he intends to use as a programme and pass for admission to another "lecture" in a local football-ground. He now styles himself "chemist and journalist."

A Fine of 6*l.* per Day.

Last week, at the Cork Quarter Sessions, Messrs. Fennor, proprietors of the Little Island Chemical-works, were fined 6*l.* each day for a period of four days during which they carried on business without being registered under the Alkali-works Regulation Act. The same defendants were also sued for having failed to use proper means of preventing the discharge into the atmosphere of all noxious gases from their chemical-factory. The defendants insisted on using what is known as the water-system, and the case was adjourned for the purpose of getting the evidence of skilled chemists.

Ousting the B.P.

The medical staff of the Belfast Hospital for Sick Children have notified the pharmacists in Belfast that, on and after July 1, prescriptions will be written by the doctors according to the Pharmacopoeia in use at that institution.



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An Inning after an Outing.

The Edinburgh Chemists', Assistants', and Apprentices' Association held its first summer meeting at 36 York Place on Friday, June 11, at 8 30 P.M., Mr. George Sinclair pre-

siding. The object of these meetings is to foster an interest among the members in practical field botany. Specimens of plants are brought to the meeting, classified, named, and described. Last week Messrs. G. and J. D. Sinclair, McBain, Center, Currie, Kidd, Sime, and Pike brought a large number of plants from Blackford Hill, Craigcrook, and Colinton, and at 9.15 Mr. J. R. Hill pointed out some of the interesting features of the collection. The specimens included a plant of *Geum intermedium* from Colinton, in which nearly all the stamens had become transformed into petals, and a plant of *Ranunculus acris* from Craigcrook exhibited a similar condition. Two interesting exhibits were vigorous plants of *Ribes nigrum* and *Hedera Helix*, which were shown as twigs at a summer meeting two years ago. They had been planted by the Pharmaceutical Society's caretaker, and are now good growing plants. One member showed the curious flesh-coloured flower of the common *Aspidistra*, which is fertilised by snails.

That Function.

The annual excursion of the Edinburgh District Chemists' Trade Association took place on Thursday, June 10, to the district of St. Mary's Loch, in Ettrick, as foretold in the *C. & D.* recently. The weather was fine. The party consisted of 140 ladies and gentlemen, and they went through the programme already sketched in our pages; but our correspondent adds many details about the journey which show that it was immensely enjoyed by the excursionists, and that they saw everything worth seeing while they journeyed. They reached Tibbie Shiel's cottage about 1 o'clock, and about two hours were spent there, tea being served; after which Mr. Rea I. Macdougall grouped the party, and Mr. Brown and Mr. J. A. Forrester photographed the group. At 3 o'clock the journey to Selkirk was resumed, a visit to the Rodona Hotel being dropped out of the programme. Taking the north side of the Ettrick the party passed many places reminiscent of Hogg. Selkirk was reached about 5 o'clock, and the party had dinner in the County Hotel. Apologies were received from Provost Roberts (Selkirk), Mr. D. Storrar (Kirkcaldy), Mr. W. L. Currie (Glasgow), Mr. D. B. Dott (Edinburgh), Mr. T. Maben (Hawick), Mr. G. Lunan (Edinburgh), and about fifty others. After dinner Mr. J. Laidlaw Ewing proposed a vote of thanks to the committee, coupled with the names of Mr. John Bowman (the President) and Mr. C. F. Henry the (Honorary Secretary), who briefly replied. The Chairman (Mr. Bowman) then proposed the health of Mr. Mercer, of the County Hotel, under whose management the local arrangements had been carried through with such success. Selkirk seemed proud of the visit, and sent the town band to play the excursionists to the station, which is a thing that does not happen to pharmacists every day of their lives.



Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Gwilym Evans of and for Llanelly.

At a Council meeting of the Carmarthen and Llanelly Liberal Associations on Monday, Mr. Gwilym Evans, J.P., Ph.C., F.C.S., Westfa, Llanelly, was selected by an absolute majority to contest the Boroughs at the next election. Mr. T. Terrell, Q.C., and Mr. Alfred Davies, Hampstead, were Mr. Evans's opponents, but the facts that he is a large employer of labour, and has considerable interest in several industries at Llanelly, helped to carry the day for him.

Using Somebody Else's Bottles.

At the Pontardawe Police Court on Friday, Mrs. Ann Griffiths, of the Ystalyfera Hotel, was charged with selling lemonade in bottles, the property of Mr. E. Evans Bevan,

of the Vale of Neath Brewery. The South Wales Association of Mineral-water Manufacturers prosecuted, and held that the case was similar to that of Wood v. Burgess, decided by Lord Colclridge. Defendant pleaded guilty, and was fined 40s. and costs.

Adulteration of Drugs in Glamorganshire.

At a meeting of the Local Government Committee of the Glamorgan County Council last Thursday Mr. C. A. Seyler, B.Sc., F.I.C., F.C.S., public analyst, presented a report giving the result of the analyses of 245 samples of food and drugs during the past quarter. After mentioning that the practice of adding boric acid to butter is very prevalent, and pointing out that some of the samples of ginger were in lumps, covered with a white crust of sulphate of lime, which is very deleterious, Mr. Seyler stated that the systematic examination of the quality of the drugs supplied in the county of Glamorgan begun last quarter has been continued, and the inquiry extended chiefly to the tinctures of aconite, opium, and cinchona. One sample of tincture of belladonna was found to contain alkaloids 0.014, extractive 0.55, and its specific gravity was 0.9568, thus showing that the sample was made with weak spirit about 33° under proof. The average strength of commercial samples examined last quarter was only 3 per cent. under proof. The amounts of extract and alkaloids were also very low, and he was of opinion that the sample was prepared with German leaves, which are about one-third the price of the best English leaves directed by the Pharmacopœia to be used. Ten samples of tincture of aconite were examined. This should be made with rectified spirit, and should contain about 0.05 of alkaloids and 2.3 of solids. Three of the tinctures were "over strength" (0.052 to 0.0325 alkaloids), three "good or fair" (0.044 to 0.05), three "low" (0.025 to 0.036), and one "very low" (0.012). The extractive varied greatly, and not at all in accordance with the alkaloidal value. Thus, 0.70 solids and 0.044 alkaloids in one case, 3.05 solids and 0.052 alkaloids in another, and 2.24 solids and 0.012 alkaloids in a third. The spirit was weak in four cases. A similar full report was submitted of tincture of cinchona, showing that thirteen samples were examined. This tincture is a favourite domestic medicine, and the public, he reported, expect to get the compound tincture, which has a pleasant flavour. He reckoned that the simple tincture should contain 1 per cent. of alkaloids and the compound 0.5 per cent., if made with the official bark. As a matter of fact, he found the alkaloidal strength of the samples of compound tincture to range from 0.73 to 0.15 per cent., one only being above strength (0.73) and two "fair." The simple tinctures (three) were 0.15, 0.42, and 0.58 per cent. respectively. Eleven samples of tincture of opium were examined for morphine by the method of Teschemacher and Smith, modified by Dott, due allowance being made for the fact that though theoretically the tincture should contain about 0.75 per cent. of morphine, in practice only 0.5 to 0.6 per cent. is obtained. Three of the eleven samples gave yields of 0.649 to 0.736 per cent., five samples yielded from 0.844 to 0.872, and three from 0.906 to 1.120; so that the majority of the samples were above pharmacopœial requirements.

Two samples of spirit of nitrous ether were examined. One proved to be of good quality, but the other was deficient in nitrous ether to the extent of at least 27 per cent. and was, moreover, made with weak spirit. For the benefit of the trade Mr. Seyler added—

Druggists could easily protect themselves from the consequences of the deterioration of this article by observing the following rules:—

1. To buy a good article made with spirit of full strength; a small quantity of water greatly increases the liability to change.
2. Not to buy large quantities at a time, and to keep the stock-bottle well stoppered and tied down in a cool place.
3. To test their preparation from time to time by means of Allen's nitrometer, and if it approaches the lower limit to bring up its strength by the addition of a strong solution such as can be easily obtained or prepared.

A sample of orange-quinine wine was found to contain 0.91 gr. per oz. of quinine sulphate. Mr. Seyler recommended that samples of the following drugs be obtained:—Tincture of iodine, compound tincture of benzoin, spirit of camphor, and quinine-wine. The report was a lepton.

French News.

(From our Paris Correspondent.)

A LINK OF THE PAST GONE.—The death is announced of Vicomtesse de Milly, *née* de Bussy, widow of the chemist, who, with Chevreul, created the stearine-industry in France. The deceased lady was mother of the widow of General Clinchaut, formerly military governor of Paris.

THE PASTEUR MONUMENT.—The subscription fund for the statue to be erected in Paris in memory of Pasteur has reached 297,000*f.* (or nearly 12,000*l.*) A final decision will shortly be taken by the Central Paris Committee with regard to the form of monument to be erected, and the best site.

A NEW CHLOROPHYLL THEORY.—At Monday's meeting of the Academy of Sciences M. Etard communicated a note on chlorophyll. As the result of a prolonged chemico-biological research upon the relations of chlorophyll-bearing organs, he has demonstrated that of different species of plants each has various chlorophylls differing from the chlorophylls of other species. Every plant, says M. Etard, requires a certain number of chlorophylls to hold captive the heat and light rays by means of special "bands of absorption," which select for every molecular change the particular heat and light waves that suit them.

FATAL REASONING.—A wholesale florist of the rue de l'Estrapade, Paris, has just met with his death under circumstances which show that mathematical calculations may sometimes be dangerous. For some years past he had suffered from a malady of the heart, and recently his condition became worse. Thereupon his medical adviser prescribed for him fifty $\frac{1}{4}$ -milligramme digitalin granules, to be taken in daily doses of four granules, at intervals. Last Saturday the florist received the medicament from his pharmacist, and, after some reflection, said to his wife, "The doctor told me that by taking four of these granules per day I should be better in a week or two. If I take eight a day my health will improve in less time; and, consequently, if I take the whole fifty now I ought to be restored to good health at once." He therefore proceeded to absorb the fifty granules of digitalin, with the result that he expired a few hours later.

M. BERTHELOT'S NEW WORK.—The new work, in two volumes, by M. Berthelot, referred to in last week's *C. & D.*, bears the title, "Thermo-Chimie: Données et Lois Numériques," and covers nearly forty years of research and experiment, which will leave an indelible mark in the history of humanity. This work has aroused the liveliest interest in Paris scientific circles. The preface, which M. Berthelot read last week to the Paris Academy of Sciences, explains sufficiently the bearing of the book. The author particularly draws attention to the leading part played by thermo-chemistry, both in pure science as well as in arts, industries, and agriculture. M. Berthelot in no way intends this work to replace his "Essai de mécanique chimique," published in 1879. In referring to the progress of his calorimetric method, the great chemist says that those who have entered the paths of new chemical mechanics have been struck by the fruitfulness of the first predictions. He considers that the future will show more and more development in these matters.

The Nancy School of Pharmacy.

THE report of the last scholastic year of the Nancy Superior School of Pharmacy, by M. Schlagdenhauffen, has just been issued. This is the smallest of the three French Schools exclusively devoted to pharmaceutical teaching. There are now forty pupils on its books, rather fewer than during the preceding scholastic year. Of these thirty are studying for first-class, and ten for the second-class certificates; all come from the east of France, except one Turk. The director proposes that as the University of Nancy includes the departments of the Meuse and the Vosges, the second-class students should be allowed to pass their examinations at Nancy instead of, as at present, in the department where they

intend to practise. This concession has already been given to the faculties of Bordeaux and Toulouse. Five first-class and nine second-class diplomas were granted last year to Nancy students. The place of M. Jacquemin, Professor of Chemistry, at Nancy, who retired on account of age, was taken by M. Meslans, his assistant. This young savant had infused new life into the chemistry classes and acquired great popularity, when he somewhat suddenly announced his departure for abroad to study in some of the principal laboratories in Germany, England, and other countries, and to visit the chemical-works of those countries which principally supply France. He was in England till recently, studying in Ramsay's and Roscoe's laboratories, and has now gone to Switzerland. It is pretty evident that its proximity to the German frontier keeps Nancy on the alert in an industrial as well as in a military sense. The handsome town itself is undefiled by factories, but all around iron and chemical works have sprung up. The importance of combining theory with practice, so well understood in Germany, is fully recognised at Nancy. Since the foundation of the *Institut Chimique* eight years ago, no fewer than 200 original essays on scientific subjects have been published by the Professor and his pupils. The course is three years. M. Haller, the director, follows with interest the comparative progress of the chemical industry and studies in Germany and England. In a lecture on "Science and Industry" he pointed out the enormous development of the aniline and alizarine industry in Germany. The director's ambition is to found a school of dye-chemistry at Nancy, but the money is not yet forthcoming. His brewery school is so largely attended that new premises are urgently necessary, for at the present moment pupils are being refused.

Colonial and Foreign News.

COMPULSORY SUNDAY CLOSING OF DRUG-STORES is contemplated by the Connecticut Legislature, which has discussed a Bill restricting the business of the pill-mixer and soda-water vendor to the six lawful days of the week, but permitting druggists to keep open for the sale of medicines from 8 A.M. to 10 A.M., 3 P.M. to 5 P.M., and 7 P.M. to 9 P.M. on Sundays. The druggists themselves oppose the Bill.

THE P.A.T.A. IN CANADA.—Canadian druggists have been considering how they can prevent undue cutting, and at meetings of the wholesalers and retailers in Toronto and Montreal last month decided to recommend to the manufacturers the plan of the P.A.T.A. of England, with the addition of two conditions necessary to meet trade requirements in Canada. Manufacturers have also taken steps to form an organisation, so that they may be in a position for united action.

SUICIDE OF AN ITALIAN PHARMACIST.—Signor Rega, a chemist of Castellamare di Stabia, near Naples, was the other day tried on a charge of manslaughter by unlawfully increasing the amount of aconitine specified in a prescription. In his defence the chemist said that even if he had done so it could not possibly have caused the man's death, and in order to convince the Court he took the bottle which had been seized by the police, and which still contained a large quantity of the medicine, and drank off the contents regardless of the warnings of the Judge. Almost as soon as he had swallowed the draught he was seized with terrible abdominal pains, and died in the course of a few minutes.

NEW CONDENSED-MILK PROCESS.—Efforts have long been made to produce condensed milk which in taste, smell, nutritive value, and easy digestibility would serve to replace fresh milk. This object has now, according to a Copenhagen report, been attained. "By a very simple and ingenious process the milk is condensed at a low temperature in such a manner that its chemical composition is not altered, and, at the same time, all bacteria are destroyed." Condensed to about one-third of the original volume, the product may serve the purpose of ordinary cream, whilst mixed with two parts of water to one of the condensed milk it reproduces the original milk. It is expected to be put on the market in tins.

GERMAN CUSTOM-HOUSE TARE-ALLOWANCES.—By a recent decree the tare-allowances made by the German

Customs have been changed in the case of a number of articles. The only ones among these that are of any pharmaceutical interest are:—Spectacle-glasses of white glass, unset, in cases or cases, tare-allowance reduced from 40 per cent. to 17 per cent.; tea, in ordinary wooden cases, not lined with tinfoil, of 20 kilos, gross weight or under, tare-allowance increased from 23 per cent. to 24 per cent.; tea, in similar unlined cases of from 20 to 30 kilos, gross weight, tare-allowance reduced from 23 per cent. to 21 per cent.; tea, in similar unlined cases of 30 kilos, and upwards, tare-allowance reduced from 23 per cent. to 19 per cent. These alterations are to take effect from July 1 next.

THE EXPLOSION AT SCHERING'S FACTORY.—Schering's chemical-factory, of Berlin, have issued a circular giving an account of the explosion that took place at their factory on June 2. They say that they take this step in order to remove false reports that have been spread. Shortly before midnight on June 2—thus goes the account—a workman on night-duty noticed a nitrous vapour emerging from a locked shed used for the storage of mineral acids. He informed the night-watchman, who sounded the fire-alarm. The brigade, with several of the firm's chemists, hurried to the spot, and the fire, which by this time had taken a firm hold of the shed and the stocks of sulphuric and nitric acids in its immediate neighbourhood, was subdued after a short time. Three small sheds were destroyed, one of them devoted to the manufacture of collodion; but the damage is not great, especially because the collodion department was in course of removal at the time to the new factory at Charlottenburg. The report that a quantity of gun-cotton was stored in one of the sheds is absolutely untrue. The firm have never manufactured, or even dealt in, that article. No injury whatever has been done to the photographic or any other department of the factory. The execution of collodion orders will suffer about three weeks' delay. It is true that several firemen were overcome by the nitrous vapour and removed to the hospital. One died the next day; the others are now out of danger.

Legal Reports.

DENTISTS' ACT.

SCOTCH JUDGES DECIDE THAT A DESCRIPTION OF AN OFFICE IS NOT AN INDIVIDUAL'S TITLE.

THE Lord Justice Clerk, Lord Trayner, and Lord Moncreiff, sitting as judges in the Justiciary Appeal Court, Edinburgh, on Saturday last, gave judgment in the appeal by Alex. Emslie, 1 Rankeillor Street, Edinburgh, against a conviction obtained against him in the Edinburgh Sheriff Court under the Dentists Act, 1878, some time ago, under the circumstances noted in the appended judgment.

Lord Trayner, who led off, said he was of opinion that the methods by which the offence charged were said to have been committed were not relevant to infer a contravention of the statute, and that the conviction should be set aside. The statute nowhere provided that it should be unlawful for anyone to practise dentistry unless he was specially qualified. It might fairly enough be said that the statute contemplated that such persons would practise dentistry, as it provided that unregistered persons should not be entitled to exact fees for any dental operation. What the statute did prohibit was any person taking or using the name of "dentist" or "dental practitioner," or "any name, title, addition, or description" implying that he was registered under the Act, or specially qualified to practise dentistry. The appellant did not call himself a "dentist," or "dental practitioner," and it was clear he had not contravened the statute. He had exhibited a signboard or brass plate on his premises with the words thereon, "American Dentistry. A. Emslie"; and another on the door of his premises bearing the words "Dental Office." These words—he took the two inscriptions together—might no doubt be read by many that dental operations were performed on these premises, and performed by the appellant, but they contained nothing to imply that Mr. Emslie was registered under the Act, or that he was specially qualified to perform these operations. What the statute provided against was anyone using a name or

designation which was descriptive of a registered or qualified practitioner, who was not in fact entitled to the designation which the assumed name or description implied. Here the appellant had assumed no title whatever. He did not call himself a dentist, dental practitioner, dental surgeon, or licentiate in dental surgery. If he did so he would contravene the statute. But he had added nothing which his Lordship thought was the thing the statute prohibited by way of title, addition, or description implying that he was registered as a dentist, or that he possessed or claimed to have any special qualification for the performance of dental operations. Neither "American Dentistry" nor "Dental Office" could be said to be a name which the appellant had assumed, and neither was a title, addition, nor description added to his name implying special qualification for dentistry.

Lord Moncreiff said he was quite of the same opinion. The charge was based on the third section of the Dentists Act, which Act did not prohibit the practice of dentistry, but imposed penalties on unregistered persons using a name, or title, or description implying that he was registered or was specially qualified to practise dentistry. Now the question was whether the methods libelled were in the sense of the third section of the Act a description implying that the applicant was a person specially qualified to practise dentistry. He agreed with Lord Trayner that the description contemplated in the statute was descriptive of an individual, and indicating his special qualification for the work by training and practice. The terms of the statute were not satisfied by a notice exhibited outside the building which stated that dentistry was practised therein. The signboard and plate did no more than notify that the industry was carried on within; they contained no profession of the qualifications of the appellant, and the plate did not assert that he indeed was the operator. He thought the case would have been precisely the same if a notice had been put up, "Teeth drawn here," which would not, he feared, convince many sufferers who came to the place. He therefore thought, although a relevant case might have been made if the complaint had been carefully framed and based on the diploma mentioned in the fourth method which the Sheriff had disallowed, that there was no relevant case.

The Lord Justice Clerk said he concurred. He confessed that at first he was inclined to take a different view, and if the Act had been broadly directed against a person practising or professing to practise dentistry, he should have had no difficulty as to there being a contravention. But that was not what the Act bore. The part of the Act founded on struck at a man holding himself forth as a person who was specially qualified to practise dentistry. It did not strike at the practice of dentistry; it only deprived them of any legal right to sue for remuneration for work done. The question therefore was whether what was set forth in the two charges constituted the taking or using of a name, title, addition, or description implying that he was a person specially qualified to practise dentistry. What he did was to place "American Dentistry" on his own premises in juxtaposition to his own name, and, further, the premises had on them the words "Dental Office." His Lordship could not find in these words anything implying special qualification. If he could, without a breach of the criminal law, extract teeth—and his Lordship could see nothing forbidding that—this was just an announcement that he practised dentistry.

Their Lordships accordingly set aside the conviction, and found the appellant entitled to ten guineas of costs.

Counsel for the appellant, Mr. T. B. Morison; agents, Douglas & Miller, W.S. Counsel for the respondent, Mr. Jameson; agents, Stuart & Stuart, W.S.

SALE OF FOOD AND DRUGS ACT.

TINCTURE OF MYRRH.

AT Nottingham Guildhall, on June 9, Herbert Bunting, described as a chemist, of 14 Broad Marsh, was charged with selling on March 9 2½ oz. of tincture of myrrh deficient in alcohol to the extent of 42 per cent. Inspector Byrns deposed to the purchase. He wanted 4 oz., but Mr. Bunting could only supply 2½ oz. He told witness that it had only been made on the previous day. Mr. Berryman, for the defence, said that the prosecution could not show that the

deficiency of alcohol was to the prejudice of anybody. There was a great difference of opinion as to the strength of alcohol that should be used for the preparation of that tincture. The defendant stated that he made the tincture of myrrh with proof spirit; and Mr. William Daniel Dunn, surgeon, Alfred Street, said that the tincture made with proof spirit was a better production. In reply to the Chairman, he said he thought that the tincture with a deficiency of 42 per cent. of alcohol would rather benefit than prejudice the buyer. Dr. J. O'Mullane, Heathcote Street, corroborated, and the case was dismissed.

IMITATION BOVRIL.

IN the Court of Session, Edinburgh, on Friday, June 11, Lord Stormonth Darling gave judgment in an action brought by Bovril (Limited), of 30 Farringdon Road, London, E.C., against H. Wyatt, restaurateur, of the North British Temperance Hotel, 33 Dundas Street, Glasgow, for declarator that he was not entitled to expose, sell, or offer for sale as Bovril any preparation which was not manufactured by or for the pursuers, and to have him interdicted from using bottles, tins, jars, or cups, bearing the pursuers' name, in connection with the sale of any preparation which was not Bovril. Payment of 1,000*l.* was also asked. The pursuers said the defender had on several occasions in 1896 offered for sale and sold as Bovril a preparation which was not pursuers' manufacture. Defender apologised for any infringement which might have been involved in his conduct, explaining that he had made a mistake, undertook in future not to subject Bovril to any process of manipulation, and tendered 30*l.*, with expenses to the date of the adjustment of the record, in settlement of the action. His Lordship, in giving judgment, said the case had been keenly fought, but there was little in it. The defender admitted the manipulation of the Bovril, and full explanation of his conduct was given. That, however, did not amount to a defence; it was merely a palliation. If what defender had admitted he did were done on a large scale, the damage to the pursuers' very prosperous business would be very considerable. He accordingly awarded the pursuers 40*l.* and costs and the interdict asked for.

HERB-BEER A LITTLE OVER THE LINE.

AT Blackburn, on June 5, Ellis Wilkinson, aerated-water manufacturer, Longridge, was fined 5*l.* and costs for selling beer without a licence. The beer in question was herb-beer, and the Inland Revenue supervisor (Mr. J. J. Rossiter), in stating the case, said that the authorities had great difficulty in finding out who were the real offenders in these cases, because the manufacturer got rid of the beverage so quickly. Fermentation went on, it would grow into legal beer, and then the difficulty was to fix the responsibility on the manufacturer. In this case three bottles of hop-ale, horehound-beer, and dandelion-stout were purchased and sent to Somerset House. Mr. Charles Henry Burge, Government analyst, Somerset House, stated that the dandelion-stout was sp. gr. 1.015, and contained 326 per cent. of proof spirit. The defence was that defendant's foreman had used more sugar than he should have done.

A BORAX COMPANY IN COURT.

AT the Buxton County Court on Monday, before Judge Smyly, John Thomas Poole, coal-merchant, of Newtown, sued the Refined Borax Company, of New Mills, to recover the sum of 16*l.* 10*s.* 11*d.*, value of goods supplied and cartage. The evidence revealed a very complicated state of affairs, the point being who was really liable, the business having, it was stated, been sold to a Mr. Meldrum, who was bookkeeper, manager, and traveller to the company represented by Mr. Whittaker. His Honour decided to hear another case against the company before giving any decision. This was an action in which Thomas Barker, of New Mills, sued the company for 15*l.*, in respect of materials supplied and work done in connection with colouring and puttying the works. Mr. Whittaker denied having authorised the order given to plaintiff, and said that Meldrum had no power to give the order. His Honour said that, as to the

ownership of the works, that would probably lead to a lawsuit, either in the Bankruptcy Court or elsewhere. Mr. Goodman, for the defence, said there was no cause of action against the defendant, and the question as to the agreement for sale was a difficult one to determine. Mr. Whittaker took the view that the property had not passed to Meldrum, as he had not paid all the purchase-money. Eventually his Honour found for defendant in both actions.

CLAIM AGAINST A CHEMICAL COMPANY.

AN action has been raised in the Court of Session, Edinburgh, before Lord Stormonth Darling, by the Constantine Phosphate Company, Leith, against Alexander Cross & Sons, chemical manufacturers, Glasgow. Pursuers seek declaration that under a contract for the sale of 15,000 tons of Algerian phosphate the defenders were bound to take delivery of 1,240 tons as a shipment under the contract. They also sue for payment of 1,600*l.* and 200*l.* as damages, but had agreed to accept 1,100*l.* from the defenders, and restricted the first sum claimed to 696*l.* The defenders say the deliveries have not been made in the proper quantities or regularly, that the shipment in question weighed 1,075 tons instead of 1,240 tons, and that that was a quantity much greater than any chemical manufacturer could accommodate. They further plead that they are entitled to make a deduction for the cost of drying the phosphates.

ANISOLINE AND TRI-ANISOLINE PATENTS.

IN the Queen's Bench Division on Tuesday Mr. Justice Wills commenced the hearing of the case of the Badische Anilin & Soda Fabrik *v.* La Société Chimique, &c. This was an action brought by the plaintiffs against La Société Chimique des Usines du Rhône (anciennement Gilliard P. Monnet et Cartier), and John W. Wilson, to recover damages for an alleged infringement of letters-patent No. 15,374 of 1887 and No. 9,633 of 1892, both granted to James York Johnson and now vested in the plaintiffs, who also claim an injunction restraining the defendants from importing and bringing into England, and from manufacturing, selling, or using in England any dyes being the same as the "Anisoline" and "Tri-anisoline," covered by these patents, or any colouring-matters made according to the inventions comprised in the plaintiffs' letters-patent, or by any process being a colourable imitation of the said inventions. They also claim damages on account of all colouring-matters which were an infringement of the plaintiffs', and which they also ask should be delivered up to them. The case for the defendants was that they had committed no infringement whatever of the plaintiffs' letters-patent, both of which they said were invalid by reason of having been anticipated. Several expert witnesses have been examined on behalf of the plaintiffs, and the case is still proceeding.

PHARMACY ACT.

A PRESTON "CHEMIST" FINED.

AT Preston County Court, before Judge Coventry, on Wednesday, an action to recover penalties amounting to 15*l.* was brought by the Council of the Pharmaceutical Society of Great Britain against William Parkinson, lately carrying on business as a chemist in Lovat Road, Preston. Mr. Gray, barrister, of London, appeared for plaintiffs, and said the penalties were claimed for defendant selling poisons, and acting as a chemist, without being duly qualified. Mr. Craven, for defendant, said he did not dispute the claim, as he was perfectly convinced defendant had infringed the statute. Judgment was entered for plaintiffs, with costs, including the analyst's fees.

Gazette.

PARTNERSHIPS DISSOLVED.

Berresford, T., and Ainsworth, R., dry-soap manufacturers, Blackburn, under the style of Berresford & Co.

Turton, J., and Atkins, J. F., surgeons and general medical practitioners, Preston and Brighton, under the style of Turton & Atkins.

THE BANKRUPTCY ACTS, 1883 AND 1890.

RECEIVING ORDER.

Cox, Frederick Charles, New Bond Street, W., surgical-truss maker.

ADJUDICATIONS.

Clark, Thomas, Mincing Lane, London, East India broker.

Cox, Frederick Charles, New Bond Street, W., surgical-truss maker.

Rowlinson, Charles, Shrewsbury, mineral-water manufacturer.

Stones, George William, Pleasington, Lancashire, and Livesey, near Blackburn, chemical manufacturer.

New Companies and Company News.

MARVINE SYNDICATE (LIMITED).—Capital 3,000*l.*, in 10*s.* shares; to carry on the business of manufacturers of and dealers in "Marvine" and other food preparations and medicines. Registered without articles of association. Registered Office: Broad Street House, Old Broad Street, London, E.C.

MATTO (LIMITED).—Capital 40,000*l.*; to enter into an agreement with the Centaur Syndicate (Limited), and to manufacture and deal in articles used for the purpose of massage treatment, and particularly an invention consisting of a chain or belt whereby the massage treatment can be applied without the aid of an attendant.

H. TAYLOR & Co. (LIMITED).—With a capital of 200*l.*, in 1*l.* shares; to carry on the business of manufacturing chemists, general merchants, and sundriesmen. The first subscribers (each with one share) are:—Alfred Brown, Denton, Lancs, wire-manufacturer; Frederick Holt, Clarke's Arms, Denton, hotel manager; Mrs. Gertrude Matthews, Clarke's Arms, Denton; William Elphick, 6 Claude Street, Crumpsall, decorator; Donald Glass, agent, and John Glass, agent, 13 Trevelyn Street, Eccles; Stephen F. Smart, 59 Clarence Street, Salford, chemist. Registered without articles of association.

JAMES & M. S. SHARP & Co. (LIMITED).—With a capital of 175,000*l.*, in 5*l.* shares (15,000 5*l.*-per-cent. cumulative preference); to acquire and carry on the business of dyers, finishers, printers, scourers, and bleachers carried on by a company of the same name at the Towers Dyeworks, Low Moor, near Bradford, and at the Orchard Dyeworks, Heckmondwike, Yorks; and the business of manufacturing chemists and logwood cutters and grinders, carried on by Mrs. Hannah Sharp and James Sharp at the Low Moor Chemical-works, Low Moor, Bradford, and at the Wyke Common Dyeworks and Stores, Wyke Common, near Bradford, under the style of "The Low Moor Chemical Company." The first directors (to number not fewer than three nor more than seven) are:—James Sharp, Milton S. Sharp, James Sharp, jun., John Casson, Lionel Sharp, Thomas H. Gaunt, and Joseph S. Colefax. Qualification, 250*l.* Remuneration, as the shareholders may decide. Registered office, the Towers Dyeworks, Low Moor, near Bradford.

THE PACIFIC BORAX & REDWOOD'S CHEMICAL-WORKS.—The numbers are announced of twenty-five debentures, amounting to 2,500*l.*, in this company, as having been drawn for payment at the rate of 110*l.* for each 100*l.* bond, same to be paid on July 1 next at offices of the London and County Banking Company.

BURGIS & COLBOURNE (LIMITED), druggists, Leamington and Bromsgrove, who have a share capital of 100,000*l.*, now offer 8,000 5*l.* 5½ per cent. cumulative preference shares to the public. The vendors take 6,000 5*l.* ordinary shares for the value of the business, and the remaining 2,000 5*l.* shares are held in reserve. The directors are Mr. C. R. Burgis (chairman), Councillor J. M. Molesworth, Mr. Jas. Colbourne, with Messrs. R. J. Colbourne and E. J. Smith as managing directors.

IDRIS & Co. (LIMITED).—An extraordinary general meeting of this company is called for Friday, June 18, at

the office, Pratt Street, Camden Town, at 3 p.m., for the purpose of considering a proposal to increase the capital of the company by the creation of 50,000 new "A" preference shares of 1*l.* each, to rank in all respects with existing "A" preference shares, both as regards dividend and capital. Another purpose for which the meeting is called is to approve, with or without modifications, new regulations. The object of the new regulations is to alter the articles of association, so as to change the company from a private to a public one, and so do away with the present requirement that a shareholder must first offer his shares to the directors if he wants to dispose of them. Should the proposals be approved of at the meeting this will not be necessary, and a Stock Exchange quotation will be obtainable.

Business Changes.

Notices of changes in the retail trade, and opening of new businesses, are inserted in this section, free of charge, if properly authenticated.

TAYLOR'S DRUG COMPANY have opened a branch at 87 Westborough, Scarborough.

MR. J. I. KNOWLES, chemist and druggist, Ingleton, Yorkshire, has succeeded to the business formerly carried on by Mr. A. Wilkinson.

MR. EWART JEPHSON, chemist and druggist, has opened a new pharmacy in Duckworth Street, Darwen. Messrs. Curtis & Son, of Leeds, fitted it up for him.

MR. A. W. GEDGE, chemist and druggist, has opened an elegantly-equipped pharmacy at Malvern Link. He retains an interest in the old business at Fishponds, Bristol, which is now carried on under the style of Gedge & Co.

Personalities.

MR. C. F. PEARSON, chemist, of Secunderabad, is in England for the summer months with his family.

MR. JOHN BRISTED, of Kemp & Co. (Limited), left for Bombay last week, after a short stay in the old country for the benefit of his health.

MR. ROBERT ROBERTSON, one of Messrs. Treacher & Co.'s pharmaceutical staff in Bombay, is now home on leave, which he is spending in Scotland.

At the A.M.C. of the Unity of Oddfellows at Douglas, I.M., last week, Mr. A. Sydney Campkin, J.P., of Cambridge, was re-elected a director at the head of the poll. He was one of eight J.P.'s elected to fill as many out of the twelve seats in the directorship.

THE Hull papers record the birth of a son to Sheriff and Mrs. Owbridge. It is many years since the Shrievalty of Hull was linked to an incident of this kind, and, according to custom, municipal congratulations and a "silver cradle" will be forthcoming.

MR. LOUIS DOHME, of Sharp & Dohme, Baltimore (who is now at Baden-Baden); Professor J. P. Remington, of Philadelphia; Mr. Alfred Meyer, of New Orleans; and Dr. Frederick B. Power, Director of the Wellcome Research Laboratory, have been appointed by the American Secretary of State to represent the United States Government at the International Pharmaceutical Congress at Brussels.

MR. ALFRED MEYER, one of the above-mentioned U.S. delegates to the International Pharmaceutical Congress, is of the firm of Meyer & Chalin, New Orleans. He is a first-class pharmacien of France, and went through all the grades from message-boy to "Chef du Laboratoire" in the laboratories of the Pharmacie Centrale de France, and now acts as their agent in the United States.

A **MILITARY HAIR-BRUSH,** with a slide recess in the back for a comb, has been patented in the United States.

Society of Chemical Industry.

THE annual general meeting will be held in Manchester from July 14 to July 17. At 10.30 A.M. on July 14 the general meeting will be held in the Chemical Theatre, Owens College, when Dr. Schunck will deliver his address; and in the afternoon he will give a garden-party. The Lord Mayor of Manchester will hold a reception in the Town Hall in the evening. The afternoon will be devoted to visits to the Manchester Crematorium, Gasworks, Cold-air Stores, Electric-lighting Works, Hydraulic-power Supply, and the Manchester and Salford Technical Schools. The members are invited to an excursion down the Ship Canal from Manchester to Latchford on the Thursday, returning by train in time for the annual dinner. There will be an excursion to Beeston and Peckforton Castles on Friday, the return by Eaton Hall and Chester being optional. A smoking-concert will be held that night. On the Saturday Messrs. Levinstein's chemical-works will be visited, and Mr. Councillor Frankenburg will give a garden-party.

LONDON SECTION.

The final meeting of the session was held on Monday, at Burlington House. Very few members were present when Dr. Messel took the chair, but the numbers speedily augmented, and the attendance was in no way below the average.

One of the nominees for the Council of the London Section having excused himself from serving, the Chairman proposed that Dr. F. B. Power, the director of the Wellcome Research Laboratories, should be elected in his stead. There were five papers on the programme, of which four were delivered.

The first was a "Note on a Possible Danger from Fire Involved in the Transport of

BARIUM PEROXIDE

in Wooden Barrels," by Dr. A. Dupré, F.R.S. The note was the outcome of an investigation respecting an outbreak of fire on board ship. The cargo was miscellaneous, and included several chemicals, of which barium peroxide seemed to be one upon which suspicion might rest. Dr. Dupré's experiments demonstrated that the chemical and commercial world have been living on the brink of disaster in regarding barium peroxide as a harmless agent. A single stroke of a wooden handle on a wooden surface with a little of the peroxide between is sufficient to cause ignition. Chlorate of potash and gun-cotton are mild and inoffensive agents in comparison. "I take my old broomstick," said the Home Office explosives adviser, "and rub it once smartly on this board, on which I have placed a little barium peroxide, and you see ignition ensues," and it did, just as readily as it does when a match is rubbed on the side of the box.

Dr. Attfield extricated himself with considerable tact from a position he had been led to take up in the matter, which seemed to be in opposition to some of Dr. Dupré's conclusions; and it was very funny, when Dr. Attfield said he had not succeeded in getting inflammation by rubbing with the wood grain to grain, to see Dr. Dupré energetically demonstrating that whether with the grain or across the grain no material difference resulted.

Incidentally it was suggested that great benefit might result did the Council of the S.C.I. approach the question as to the causes leading to the outbreak of

FIRES ON BOARD SHIP,

and the desirability of having a sort of scientific court of appeal, to which scientific evidence in courts of law might be referred, was also sympathetically referred to. In replying, Dr. Dupré said it was always the unknown which was dangerous, and he reminded the meeting that picnic acid was in use for very many years before its highly explosive tendencies were discovered. The second paper was read by Mr. Watson Smith, in the absence of Dr. Pauli, manager of the Farbwerke Meister, Lucius & Bruning. The communication was on

THE VALUATION OF COMMERCIAL NITRATE OF SODA.

The author referred to the antiquated system in vogue, and insisted on the necessity for bringing the analysis of this

product more into harmony with present-day chemistry. A member of the Nitrate Committee demurred to any change being made, but the feeling of the meeting was in favour of a request that the Council should appoint a committee to investigate the value of the published methods for estimating the valuable constituents in Chili saltpetre.

An allusion to Fresenius was made in the paper, which induced Mr. O. Hehner to make, as an old pupil, a sympathetic reference to the great analytical teacher who had so recently finished his life work.

Mr. Hudson Maxim next declaimed, with a vigour which is rare in the Rooms of the Chemical Society, the "Recent Improvements in

SMOKELESS COMPOUNDS

and in Processes of Manufacture," which formed the substance of his paper. The observations referred to Mr. Maxim's own powder, where he puts into practice the theory that a multi-perforated colloid gives better ballistic properties than a solid or cored powder. The manufacture of the powder was described and the various kinds of perforations were discussed. Considerable amusement was caused by the crisp and pithy interjections with which Mr. Maxim (who is the brother of the noted Hiram) interspersed his paper. Dr. Dupré, in commenting on some of the observations, said that the introduction of urea into smokeless powders was as indefensible as the addition of boric acid to milk—the latter masks bad milk, and in neither case do you know what you have got.

Mr. Alexander Cameron briefly described some comparative experiments on the estimation of phosphoric acid, and the last paper was taken as read.

International Congress in Technical Education.

THIS Congress was opened at the Society of Arts, Adelphi, on Tuesday, the Duke of Devonshire presiding, after M. Léo Saignat, the retired President, formally gave up the office. The Duke of Devonshire explained that the meeting of the Congress in London was due to the Society of Arts and to the City companies, which had guaranteed the needful expenditure. He remarked on the beneficial effect of public conferences on educational questions, and thought the present time well chosen for an international congress on technical instruction, for in all countries there were signs of increasing interest in foreign methods of education. English education, he said, had been materially affected during the last sixty years by foreign influences. There was one point at least in which continental critics were now paying Great Britain the compliment of careful study and even of admiration. We had been recently working out an interesting and fruitful experiment in combining financial aid from the central exchequer with great liberty of action on the part of county and county borough councils. The policy of permitting local authorities to expend their share of the residue of the Excise duties on technical education had probably done more than any previous act of the State to stimulate national interest in technical instruction. The local authorities, with few exceptions, had risen to their new duties with commendable alacrity and enterprise.

THE TEACHING OF PURE CHEMISTRY AND APPLIED CHEMISTRY

was the first paper read, Professor Otto N. Witt, of Berlin, being the author. In it he advocated a thorough grounding in pure chemistry as the best training for future work, and deprecated specialism in the early part of the young chemist's career; that should come later. Professor H. E. Armstrong read a paper on an allied subject, and Dr. J. H. Gladstone followed with one on teaching chemistry in continuation evening schools, stating that in Manchester there are arrangements for 12,451 pupils at evening schools, and for 6,619 in higher-grade day schools, science being provided for all, if they want it. At present 2,738 students are attending the practical-chemistry laboratories. These papers opened the discussion on technical education, in the course of which Sir H. Roscoe stated that he recently visited some

large colour-works near Frankfurt, where 100 men were employed, including many highly-trained scientific chemists who had devoted years to original research with a view to making new discoveries. One employé, who received 1,000% a year, worked for several years without producing any results. But eventually he made a discovery which repaid the firm ten times over and placed an entirely new branch of manufacture in their hands. That showed what could be done by the application of science.

An excellent paper on

THE TEACHING OF CHEMISTRY,

by Professor G. Lunge, was read by Sir H. Trueman Wood. Professor Lunge held that, to raise English chemical industry to the foremost rank, it was necessary that the technical management of chemical-factories should not be left in the hands of "rule-of-thumb" men, but should be entrusted to real chemists. These men should have a much fuller education than the majority of chemists seem to obtain in Great Britain at present. His views as to the kind of education necessary were the same as Professor Witt's. He did not even think that, apart from isolated exceptions, high-class knowledge was much good to foremen, whose duty it was to carry out their instructions and to see that the men did their work as prescribed by the staff, but who were not to meddle with the chemical process itself. It seemed a great waste of time and means to give some superficial chemical teaching to tens of thousands of workmen on the remote chance that one of them might have some real benefit of it, while at the same time many hundreds of educated men were receiving a really efficient training in the same direction, many of whom could not find properly remunerated places owing to a great extent to the cheap labour of "bottle-washers."

On Wednesday the work was divided into two sections, one meeting in the Society of Arts' house and the other in the neighbouring premises of the London School of Economics. The proceedings in both sections consisted chiefly of papers and discussions by science teachers upon the methods of teaching and the people taught. Comparatively little was said about the teachers. Foreign delegates took part in the discussions, and some of the best papers were by them.

Glyn-Jones and the Grocers.

CAN it be that Mr. Glyn-Jones is getting tired of his first love? or that Miss Drug-trade has whispered to him in Longfellow's words—

Go, seek another wife,
Better than I and fairer,
I've ne'er done aught to
Make thee love me.

We do not pledge ourselves to the correctness of the quotation, but it was running in the head of a *C. & D.* representative who ran Mr. Glyn-Jones to earth last week—which was not a difficult thing that day, for he looked tired, having just returned from a provincial meeting.

The *C. & D.* questioner began: "Why are you courting the grocers so persistently, Mr. Glyn-Jones?"

"Oh, that is what you are after," said the P.A.T.A. Secretary. "Better give me another."

"No; tell me that first."

"Well, then," said Mr. Glyn-Jones, "you know the majority of proprietary medicines are very largely distributed to-day by grocers; and before adopting any system of protection some of the most important proprietors want to know the attitude taken up by the grocery-trade. This is particularly so with the proprietors of foods and other articles in general household use. If the fixing of minimum prices is to become the rule in relation to all proprietaries sold by chemists and druggists, influence must be brought to bear upon the proprietors by both sections of his customers. Isn't that fair?" [Here the *C. & D.* man said "nuffin."] "We cannot protect without the co-operation of the proprietor, and he, in most instances, will take no steps apart from the approval of so large a section of his distributors as the grocers."

"But it is said that by your official action you are practically making the P.A.T.A. a means of encouraging the grocers to continue their interference with the medicine-business. What do you say to that?"

"I fail to see the ground for such an assertion. Any official action taken by our Association is not the act of a body of chemists and druggists, of grocers, or of photographic dealers as such, but that of an organisation of proprietors and wholesale and retail distributors of proprietary articles. Some people make a mistake in looking upon our Association as having for its chief or only object the regulating of the patent-medicine trade."

"That was what it was started for, you know," chimed in our man.

"Certainly," Mr. Jones went on; "these articles come within the scope of the Association, but we would be sorry to restrict our operations to them."

"Development?"

"Yes, that's it. The P.A.T.A. stands for prices, and has nothing to say as to whether a grocer should be allowed to sell patent medicines, a chemist to sell tea, or a stationer to sell cameras; but it insists that whoever sells proprietary articles shall not be allowed to do so at absurdly unremunerative prices. We feel that nothing would tend to renew the former state of things, when each trade confined itself to its own class of goods, so much as the fixing of minimum prices. As a rule, the only chance a trader has to sell goods outside his own business is to cut them."

"Then you mean that the chemist should come into his own again?"

"Yes; because the public prefer to buy drugs from the druggist, groceries from the grocer, and so on. Speaking as a chemist, I believe the sooner we submit to the inevitable the better. Proprietors, some of them leading pharmacists whom you know, care little who sell their medicines provided they are sold, and the Government cares less provided every vendor pays his 5s. a year. It is nonsense to say that individual chemists joining the P.A.T.A. give up the right to be sole vendors of medicines. We never possessed that right, and I am afraid are never likely to."

Our representative might have ended the interview there, but he had another question up his sleeve, and produced it. It was this: "Allowing that it is necessary to get the grocers' alliance in coercing, or, to put it more in your style, in influencing, the manufacturers, could not this be done as effectively by two associations as by uniting the two trades into one?"

Mr. Glyn-Jones was not to be cornered. "The advantages," he said, "of joining forces under one organisation instead of the various trades each running its own separate organisation goes without saying. Our agitation is only one feature of what sooner or later must be a keen fight between individual traders as a class and the huge trading companies which are daily being formed to utilise cheap money. The struggle between the one-shop trader and the would-be trading monopoliser is common to all businesses, and, in so far as chemists are traders, they have interests in common with the single-shop dealer, whether grocer or ironmonger. Each trade has its grievances against another. These must be sunk in order to effect a union of forces in the common interest of all traders." Mr. Glyn-Jones fixed our interviewer with his sparkling black eyes, and, without a pause, went on to say: "The wider and more diffused the influence of the P.A.T.A. the better will be its chance of complete success. At present the law allows us to combine, but an attempt may be made to alter that law. In such a case it would be of immense advantage to be able to influence our legislators through a united organisation of shopkeepers. The co-operation of the various trades for the purposes of our Association does away with the necessity for separate organisations and a multiplicity of machinery. Such union increases the power of the Association in dealing with extreme cases of cutting. Each trade would constitute a practically self-governing section, and would regulate the prices appertaining to its own goods, and also control any subsidiary matters particularly affecting its own interests. Do you follow me?"

"The argument, at least," said our representative; and with a "Good morning" he left the chambers of the anti-euter and descended into the Street of Stonecutter.

GROCERS' MEETINGS.

BOLTON.

At last week's meeting of the Bolton and District Grocers' Association Mr. J. F. Steele (Hon. Sec.) read a letter from Mr. Glyn-Jones, asking if he might deliver an address to the Association on the purposes of the P.A.T.A. Commenting upon this, Mr. Steele said that grocers could not have much sympathy with the Pharmaceutical Society, because, as he understood, that Society had behaved in a rather arbitrary manner towards grocers. Grocers were selling articles with a certain amount of poison in them, and they knew what had happened. A motion was put that the Association should take no steps in the matter, and a good discussion followed, in the course of which an amendment, to the effect that Mr. Glyn-Jones be invited, was put and seconded. This, however, was ultimately withdrawn, and apparently the motion was agreed to.

LONDON.

At a meeting of the Council of the Metropolitan Grocers' and Provision Dealers' Association last week there was a discussion on Mr. Glyn-Jones's letter, and it was agreed to reply to it that the policy of the Association is one of non-interference with prices, and the Association are therefore unable to entertain the proposal to convene a meeting or to take any other action in connection with it.

MANCHESTER.

A meeting of the executive committee of the Manchester, Salford, and District Grocers' Association was held on Tuesday, June 8. Mr. John Williams (the President) being in the chair. It was resolved that the Secretary be instructed to write to the Federation Secretary asking him to place on the agenda of the Liverpool Conference a notice to the effect that a resolution would be moved that the General Purposes Committee be requested to take steps to carry out the programme of the P.A.T.A.

NORTHAMPTON.

At a meeting of the Northampton Grocers' Association last week Mr. Glyn-Jones gave a spirited address on cutting, and elaborated his proposals to form a Grocers' Section of the P.A.T.A. A resolution was afterwards carried expressing its approval of the aims and objects of the P.A.T.A.

OLDHAM.

At the Oldham and District Grocers' Association last week a resolution was moved, and unanimously carried, cordially approving of the objects of the P.A.T.A., and urging on the Grocers' Associations the desirability of giving all the assistance in its power to that organisation.

PORTSMOUTH.

At the monthly meeting of the executive of the Portsmouth Grocers' Association, held on June 8, it was agreed to leave the P.A.T.A. alone pending the result of the discussion at the Liverpool Conference.

SWANSEA.

At a meeting of the Swansea Grocers' Association, held on June 9, a request by Mr. Glyn-Jones to address the Association was agreed to.

PONTYPRIDD.

At Pontypridd on Monday night, Mr. W. Williams presiding, the local Grocers and Provision Dealers' Association again met, and finally discussed what position they should take towards the P.A.T.A. Mr. Glyn-Jones having first addressed them, and Mr. Giles (secretary to the Grocers' Federation) having asked them to pass a resolution on the subject, in view of the Liverpool Federation Conference, Mr. Isaac Protheroe (a member of the Federation General Purposes Committee) protested that the Association ought not to withdraw from the promise made to him before Mr. Glyn-Jones came down—that the Association would not again proceed with the matter; that under the circumstances it should be allowed to drop. Chemists were, he said, a powerful body, and he urged that it was most unpolitic and improper to allow outsiders to come and interfere with a business

which the grocers were well able to conduct themselves. After some discussion, which only helped to tighten the deadlock, several appeals were made to Mr. Protheroe to allow a vote, but he declined any compromise. Ultimately it was decided not to press a vote, in view of the understanding with Mr. Protheroe.

SOUTHAMPTON.

The Southampton Grocers' Association held a meeting in conjunction with the P.A.T.A. to consider the proposals of that Association. Mr. Glyn-Jones was present, and explained the scheme from the grocers' standpoint. A resolution, approving of the P.A.T.A., and asking the Federation of Grocers' Associations to assist the movement, was unanimously approved.

READING.

On Tuesday Mr. Glyn-Jones attended a meeting of the Reading Association, and the result was a resolution in support of the P.A.T.A.

THE NORTH.

Resolutions in favour of the P.A.T.A. have also been forwarded this week to the Grocers' Federation from the Northern Grocers' Council (comprising ten local grocers' associations situated in the various towns in the north of England) and from the Liverpool Association.

MORE COMING.

Meetings are to be held, before the Liverpool Conference, at the following towns, where the associations have invited Mr. Glyn-Jones to speak:—Aberdare, Birkenhead, Hartlepool, Salisbury, Swansea, Wolverhampton, Barrow-in-Furness, Bridgnorth, North London, Southport, and Hull.

Trade Notes.

"NANSEN" is the name selected by Mr. Carmichael, of 158 New Bond Street, W., for a "wholesome, digestive, and portable" breath-perfume cachou, to sell at 3d. per packet.

RADIOGRAPHIC FLUORESCENT SCREENS are much cheaper now. Messrs. Geo. Houghton & Son, 89 High Holborn, W.C., send us their price-sheet for screens mechanically coated with barium platinocyanide, the prices ranging from 7s. upwards.

MR. CHRISTY STRONG, of Reading, has a clever advertisement of the cobweb fly-papers in the *C. & D.* this week. It is the smartest thing in fly-fishing which we have seen, and only possible, of course, with the patient piscatorial enthusiast.

MESSRS. FASSETT & JOHNSON, 32 & 33 Snow Hill, London E.C., have been appointed sole representatives in Great Britain for Pasta-Mack. The price is now fixed at 20s. per dozen, less 5 per cent. discount for one-gross quantities. The advertising is to be increased in quality and quantity.

THE VOLCANIC AERATION COMPANY.—In describing this company's manufactures last week, the name and address were erroneously given in the text. We therefore ask our subscribers to note that these should be "The Volcanic Aeration Company, 203 Great College Street, N.W., and 91 Church Street, Birkenhead."

MR. S. HARVEY, 5 Denman Street, London Bridge, S.E. (proprietor of Dr. Mackenzie's Arsenical Soap), requests that those chemists who may not be showing the velvet-plush show-tablets, which he sent out some time ago, will return them at his expense—i.e., carriage forward. It is too good a thing to keep in the dark, and Mr. Harvey has a demand for the tablets which he is unable to supply.

BOVRIL STAMNOIDS.—This is a clever novelty just introduced by Bovril (Limited). The "stamnoids" are compressed tablets, consisting of bovril and something else (which seems to be sustaining as well as nice). There is sure to be a run upon them. The shilling bottle (which will go in the vest pocket) seems to contain about 100 stamnoids, quite enough to last one a whole day, and to repair the muscle waste which cyclists and others suffer during their exertions.

HOLLOWAY'S COCA WINE.—This preparation is now put up in decidedly improved style, the 1s. 6d. bottle in a handsome carton looking as good value as some wines double that price. The quality is also, we notice, maintained—the wine being of good bouquet and pleasant coca flavour. Mr. E. A. Holloway, of Torquay, who makes it, offers a liberal supply of physicians' samples upon conditions which are very favourable to retailers. He has added an elixir and lozenges of coca to his list.

SUCCINATE-OF-IRON PALATINOID.—It has recently been observed that succinate of iron has an exceedingly beneficial influence in preventing the formation of gall-stones, as, according to Drs. Buckler and Osterlony, the succinate has the property of promoting oxidation of cholesterin, and so preventing formation of the concretions. We make these remarks in connection with a new palatinoid of succinate of iron (gr. v. each) which Messrs. Oppenheimer, Son & Co. (Limited), 14 Worship Street, E.C., have introduced. In this form the succinate is perfectly stable, and can be kept in any climate.

GARSTIN'S DOG-SOAP.—Messrs. F. Newbery & Sons, King Edward Street, E.C., have been appointed distributing agents for this new article. The makers of the soap claim that it has been used with very satisfactory results, the ingredients acting directly on the skin and hair of the dog, and freeing it from parasites, &c. It has an agreeable fresh odour, and makes a good lather in cold water, while it imparts to the dog's coat a bright and glossy appearance. It is neatly put up in lacquered-metal boxes containing three tablets, and we understand it is to be considerably advertised. Judging from our experiments with the soap, it is a perfectly safe one to use for children's heads, for which purpose the makers also recommend it.

THE SCORE OF A PATRIOTIC SONG.—"Our Empress Queen," is offered by Messrs. Newball & Mason, of Nottingham, this week, to every reader-subscriber of *THE CHEMIST AND DRUGGIST*. Their advertisement this week consists of a facsimile of the cover and of a page of the score. The first page of the cover shows, however, a modification of the original, the portrait in which is one of her Majesty at the present day, which for copyright reasons cannot be reproduced as an advertisement. Our engraver has accordingly inserted as a contrast to the original a portrait of the Queen when she ascended the throne. On that page there is a coupon which has to be cut out and sent as a voucher. The music is by "Norton Dale," and that (unless our memory betrays us) is the pseudonym of a gentleman connected with Messrs. Newball & Mason.

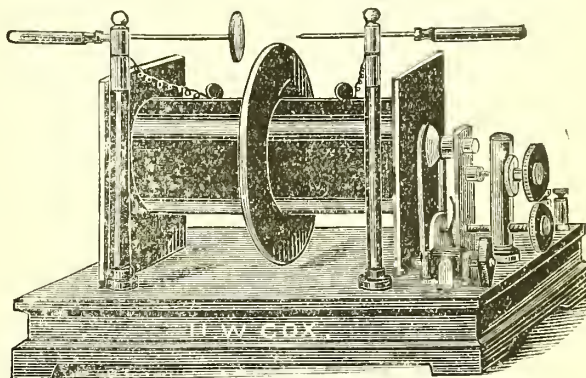
CHLOROS.—Recent bacteriological and other experiments have conclusively demonstrated that the old-fashioned ideas about chlorine being an efficient disinfectant were founded upon fact, and, apparently in view of this evidence, the United Alkali Company have prepared a disinfectant called "Chloros," and Messrs. Evans, Sons & Co., of Liverpool, have been appointed sole agents to the drug-trade in the United Kingdom. Chloros is a liquid, and contains 10 per cent. of available chlorine, no other liquid disinfectant, as far as we are aware, being so powerful in the haloid. It is put up in screw-stoppered stoneware bottles, and there is a booklet of directions for using it, which chemists should get copies of for distribution among likely purchasers of large quantities. We have no doubt that vestries, for example, and sanitary officers would try samples.

MESSRS. BURGOYNE, BURBIDGES & Co. send us a sample of Von Heyden's solutol, a disinfectant for which they are the sole agents. Solutol is a brown liquid of a not unpleasant smell. It is a coal-tar derivative containing an extremely high percentage (60) of crude cresol, its active constituent, part of which occurs in the form of sodium cresolate. This is decomposed by atmospheric action when solutol is sprinkled upon the substance to be disinfected, and free cresol liberated. It is claimed for solutol that it is not only one of the least toxic coal-tar disinfectants, but also one of the cheapest. A 1-per-cent. solution of solutol is almost immediately fatal to *Staphylococcus aureus*, and a 10-per-cent. solution rapidly destroys anthrax spores, which are among the most resisting known. Solutol is sold in bottles, tins, or 4-cwt. casks. It makes an excellent weed-killer.

MESSRS. EVANS, LESCHER & WEBB have this week circularised the trade regarding the protection of Savarasse's capsules, as stated in the *C. & D.* last week. While they fix the minimum prices as there stated, they add:—

The nature of the sale of these remedies is such that, in our opinion (as the chemist's advice is often sought in connection with remedies of this kind), there is no reason why the full retail prices—viz., 2s. 6d. and 4s. 6d.—should not be obtained in nearly all districts.

X-RAY APPARATUS.—Mr. H. W. Cox, of Cursitor Street, W.C., a highly competent practical electrician, has paid special attention to the manufacture of the various kinds of apparatus required in Röntgenography, and we had the pleasure the other day of going thoroughly into the manufacture of induction coils along with him. Mr. Cox has a method of his own for the production of these which is not, as far as we are aware, practised by any other manufacturer. The principle is not new to electrical science, but it is not, to our knowledge, thoroughly carried out in practice by electricians. We are not at liberty to go into details, but we may explain that in the building of his coils Mr. Cox brings



together into one coil two cylinders absolutely equal in electrical energy, and so brought together at the junction that resistance is reduced to almost *nil*. The result is a steady working coil which never breaks down. Whether breaking-down is or is not a theoretical impossibility, Mr. Cox is not prepared to say, but he has never had a breakdown. The insulating-composition is a mixture of high melting-point. We inspected the manufacturing from the foundation, and can speak to the thoroughness of the work and the quality of the finish. We also tested an 8-inch spark coil, and found that it gave a 10-inch spark easily. Mr. Cox makes a feature of turning out his coils with a larger spark than the guarantee. As to the capabilities of the coils, we read a letter from a South London medical man, who found that with a 4-inch one he could see the thoracic organs of a man easily. Mr. Cox makes all kinds of electrical apparatus, including the installation of telephones and telegraphs. The above cut shows a Cox coil.

JUBILEE PLASTER.—Says a City paper:—"Chemists apparently share the forebodings of public officials that the Diamond Jubilee celebrations will not pass without damage to some of the celebrants. In many chemists' shops in London just now there is on sale what is, perhaps, the most curious Jubilee speciality that has yet made its appearance. This is in the form of an imitation Jubilee half-crown, beautifully burnished, and tempting to the sight. But it is a hollow delusion, and contains pieces of sticking-plaster of different sizes. They are admirably adapted—so say the chemists—for covering a black eye or an abrasion of skin, and the price is very moderate. A run upon the article is anticipated, for it is pretty certain that in the rush and crush of June 22 many trifling injuries will be sustained of the sort which the contents of the mock half-crown can easily repair." Our contemporary does not put the thing quite correctly. We saw the article in Maw's the other day. It is "made in Germany," costs 9s. a gross, and consists of a disc of leather which revolves in the nickel half-crown front. There are four recesses in the leather, each containing sticking-plaster ready to put on, and one turns the disc to a notch in the nickel in order to get out a bit of the plaster.

WEED DESTROYER

Will Chemists please note that we can supply an excellent article at 1/- per gallon, drums or casks extra, delivered free London?

THE SANITAS CO., LIMITED,
BETHNAL GREEN, LONDON,
DISINFECTANT MANUFACTURERS.

A NEW SIZE.

ELLIMAN'S

8

¹/₂

EMBROCACTION

7/9, 10 per cent. discount upon gross lots, or assorted in general order.

ELLIMAN, SONS & CO., SLOUGH, ENGLAND.

"EUREKA" WEED KILLER

(Powder or Liquid).

Extensively Advertised. Safely Packed. Best Make to Sell. Liberal Terms. Attractive Advertising Matter.

ONLY MAKERS—

TOMLINSON & HAYWARD,
Mint Street Chemical Works, LINCOLN.

G. S. MUMFORD

FARRINGDON ROAD, LONDON, E.C.

No. 1 Finest Pure CRUSHED LINSEED	16/ cwt.	Finest Pure STARCH POWDER	20/ cwt.
No. 2 Pure CRUSHED LINSEED	14/ cwt.	No. 1 Finest Light Pure PRECIPITATED CHALK	25/ cwt.
BEST CLEANED LINSEED	15/ cwt.	No. 2 Pure PRECIPITATED CHALK	21/ cwt.
No. 1 Finest Pure FULLER'S EARTH (Light Colour)	15/ cwt.	"WHITE EARTH" Specially prepared for Toilet purposes.	18/ cwt.
No. 2 Pure FULLER'S EARTH	13/ cwt.	Finest Pure TOILET OATMEAL, SPECIAL	3/ lb.
Pure LIQUORICE	7/10 lb.	Best Pure ARROWROOT	9/ lb. in time.

* CARRIAGE PAID to Railway Stations within 200 miles of London (or allowance made for distances beyond) on a total weight of 112 lbs. and upwards of above articles. Smaller parcels delivered free on rail London at above prices.

CONDY'S FLUID.

ELEVEN INJUNCTIONS

With damages and costs, have been obtained against Chemists selling a liquid not manufactured by Condy and Mitchell, Ltd., in execution of orders for "CONDY'S FLUID."

JEWSBURY & BROWN'S

SODA-WATER,

Lemonade, Ginger Ale,

BREWED GINGER-BEER,

&c., &c.

Manufactory—ARDWICK GREEN, MANCHESTER.

PEPSALIA.

Pepsalia is now being extensively advertised, and may with safety be stocked to meet the renewed and increasing demand.

It bears a good profit, and may be obtained from the Wholesale Trade, or from

THE PROPRIETORS, CEREBOS LIMITED, NEWCASTLE-ON-TYNE, AND 3 MAIDEN LANE, E.C.

COCA TONIC CHAMPAGNE

Prepared and Bottled by the Actual Champagne Growers at Bouzy-Reims.

We supply elegantly embossed cartoons for Windows and Packing; also artistically executed Show Cards, free.

For prices and particulars, apply to the Sole Proprietors—

HERTZ & COLLINGWOOD, 38 Leadenhall Street, LONDON, E.C.

"Any man may make a mistake; none but a fool will stick to it."

IF YOU DON'T WANT TO STICK TO IT, USE—

Fletcher's Concentrated Liquors.

PHARMACY IN THE RECORD REIGN.

It is impossible for even a pharmaceutical journalist to avoid the now universally-discussed topic of the past sixty years. People with reminiscences are just now at a premium. They have been accounted the worst of bores hitherto, and they will soon drop back into that unenviable regard again. But

for the moment they are in the ascendant. We are all, old and young, trying to realise the condition of things when Queen Victoria succeeded her uncle. In outward conditions no doubt vast improvements have been effected. We live cleaner, more wholesome, and we should say happier, lives now than our fathers and grandfathers did. We work shorter hours, many of us, we are better fed, the air of our towns is less polluted, business is made more of a pleasure than a task, luxuries come to us from foreign lands more abundantly, we get from place to place more quickly and more comfortably, we see more of the world in which we sojourn, our amusements are brighter and more worthy of us than they were, and even our troubles are softened in many instances. Anæsthetics have contributed principally to this last result, and elegant pharmacy and tasteless medicines have done something towards alleviating the minor difficulties of curing our complaints. Science has accomplished great things—not so great, perhaps, as in the previous sixty years—engineering has done more. We are not of those who think that all the talent of our history has been concentrated in the period under review, or that, as has been asserted, more progress has been made in these sixty years than in the six centuries preceding them. But we do not for a moment question the solid basis for the national jubilation which is now upon us.

Falling from a general survey to a closer examination of the little corner of the vast field of activity where chemists and druggists pursue their industry, we find ourselves compelled to adopt a more pessimistic strain. There are twenty-one gentlemen who meet monthly in Bloomsbury, and two or three hundred of their thick-and-thin supporters about the country, who firmly believe, and energetically propagate, the creed that before the Pharmaceutical Society was founded in 1841 the drug-trade was a mere chaos. This is a myth without the shadow of a foundation. We have at various times told the story of the historic houses of pharmacy in these columns. These records show by side-glances that, if there was a choice, the palmy days of the retail drug-trade were those of the early part of the century. There was no register of chemists and druggists then; the designation pharmaceutical chemist was unknown; the more common description was open to anyone to assume; and yet, without a doubt, the title and the trade were less trespassed upon by incompetent persons in those days when the law had nothing to say as to infringement such as it has now. The men who founded the pharmacies which have lived till now, and the men who in every town carried on the drug-trade, were thoroughly competent chemists and druggists; then apprenticeship-indentures were as much respected as the diploma of our own days; and their neighbours respected the "art and mystery" which they professed and practised.

Nothing like the aggregate profit could have been made out of pharmacy then as compared to now. It was a very nice business for a few, but the smaller men made quite modest incomes, and all were then content with less. There were far fewer ways of spending money. There were no chemists' balls, no chemists' dinners, no chemists' picnics, no associations to subscribe to, and, we are sorry to have to add, no chemists' journals to read. This last fact will, perhaps, reconcile our modern men to the general degeneracy of this end of the century.

The wholesale has changed much more largely than the retail trade. Time was—and it is less than sixty years ago—that the wholesale trader prided himself on the dinginess and discomfort of his surroundings. The office where he spent the greater part of his wakeful existence was a dark and cheerless place, from which it was the duty of a true business-man to banish every suggestion of taste or comfort.

In this respect, as well as in the general tendency towards wise and liberal expenditure on the premises where business has to be conducted, the age has seen a considerable revolution. The development of the drug-trade as shown by the wholesale houses is, indeed, very remarkable. The introduction of steam-machinery, of laboratory-manufacture of the troublesome galenicals which once formed a large part of the training of the embryo druggist, the substitution of advertisements of various kinds for the traveller who used to make his leisurely half-yearly visits, driving his chaise from town to town, and, above all, we think, the growth of the great wholesale and manufacturing businesses in the provinces, while those of the metropolis have certainly not fallen off in extent—all these facts show that the drug-trade generally has assumed a far more important position at this end of the century than it held in the thirties. The drugs imported and the medicines manufactured have grown in quantity far more in proportion than the population, the advertised medicines must sell on a vastly greater scale than those of yore in order to pay for the advertising; so, contrary to the general impression, the public must dose themselves more freely, because oftener than they did in the brimstone-and-treacle days.

In a number of the pages following we give a somewhat detailed account of the drug-trade of the period, viewed from different aspects, and there is more that we have been compelled to reserve until next week. Should any veterans in the drug-trade have anything to add to what is now said, we shall be glad to hear from them.

TRADE-MARK SEARCHES.

THE acknowledged disadvantage suffered by traders carrying on business outside London in searching for trade-marks, compared with the facilities enjoyed by Londoners, is brought forcibly under our notice every week, owing to inquiries from our subscribers; and, with a view to seeking some modification of the conditions of search, we addressed to the Comptroller-General of Patents and Trade Marks the following letter:—

SIR,—We are frequently applied to by chemists all over the country asking if a certain word or device is registered. We are obliged to inform our correspondents that they must ascertain the information they want by a search at the Trade Mark Office. We understand, however, that such a search can only be made personally, and this, of course, occasions great difficulty to applicants living out of London.

We wish to ask you, therefore, whether it would not be feasible to provide that replies to such inquiries should be given through post on payment of the same fee as charged for a personal search.

We think it right to add that we propose to publish this letter with any reply with which you may be pleased to favour us.

Yours, &c.

To this we have received the subjoined reply:—

The Patent Office: Trade Marks Branch,
25 Southampton Buildings, London, W.C.,
June 14, 1897.

SIR,—I have your letter of June 4, and in reply thereto would say that some years ago there was a system at this office under which searches were made at the request of persons who were unable to attend at the office. In practice it was found that the system did not work well, and in consequence it was found preferable to remove the necessity for the existence of that system. This was done by reducing the expense of an application for registration to a minimum—namely, 5s.

Any person who desires to ascertain if a word or device is registered can, under our present practice, by paying 5s., ascertain how the Register stands by applying to register that device or word.

To reintroduce the system as it obtained prior to this alteration would necessitate an alteration of the rules, and of the fees charged, and I am not at present in possession of information which leads me to think that our present system is not a tolerably satisfactory one.

I do not see how, if the services of highly-qualified searchers such as are now employed at this office, be called into requisition, the fee can be less than 5s. in any case. Having regard to the very large number of registered marks which, as you know, must yearly increase, I do not myself think that any but highly-qualified searchers can or ought to be employed.

I would for your information add that suitable inquiries as to the question whether words or devices fall within the statute—that is to say, whether the word is a word capable of being registered, or the device is a distinctive one—are answered under correspondence without fee. This, it is found, removes some of the difficulties in the way of seekers after new marks.

I am, Sir, your obedient servant,

RALPH GRIFFIN,

The Editor, THE CHEMIST AND DRUGGIST.

Registrar.

This reply may be considered satisfactory in so far as the last paragraph concedes all that chemists generally want to know—viz., whether a trade-mark can or cannot be registered. Judging from the inquiries which are addressed to us, and which may in future be directed to the Registrar, only in a small proportion of cases is it necessary to pay the 5s. fee in order to ascertain whether a registrable mark is registered.

DENTAL TITLES AND SIGNBOARDS.

THE important judgment given in the Justiciary Appeal Court, Edinburgh, by three of the most learned Scotch Judges, decides once for all, so far as Scotland is concerned, the distinction between individual titles or descriptions under the Dentists Act, and descriptions of premises wherein dental operations are performed. No better justification for our recent action in regard to the practice of dentistry by chemists than the Scotch Judges' decision could be given. Without entering into details regarding the circumstances under which Mr. Emslie, the Edinburgh dentist, was fined, we may state that his offence was exhibiting signs having the descriptions "American Dentistry" and "Dental Office" upon them. The agents of the British Dental Association considered this an offence under the third section of the Act, Mr. Emslie being an unregistered person, and he was fined three guineas and two guineas of expenses for the illegal use of titles. We have always maintained that the action of the Association in such cases was a straining of the law, that they were going beyond the intentions of the Act, which in no way restricts the actual practice of dentistry. Its intention is to create a class of persons specially qualified for performing dental operations, in the same way that the Pharmacy Act has endeavoured, through the registration of chemists and druggists, to ensure an adequate supply of persons competent to sell poisons. In the latter case the Pharmaceutical Society, although it has the right to have persons brought to book who use the title chemist and druggist, or its equivalent, would never dream of prosecuting persons using such descriptions as "Chemicals sold here," and "Drug-store." The British Dental Association's powers are similar to those of the Pharmaceutical Society; but it has been doing precisely what the Pharmaceutical Society does not do. The Justiciary Appeal Court decision may, therefore, help the British Dental Association to second thoughts, and to confine their attentions to those who really use personal titles.

U.T.A. AND P.A.T.A.

The U.T.A. is the American counterpart of the P.A.T.A., and its organ, the *Retail Druggist*, has taken to patting the P.A.T.A. on the back. Its last article on the subject, which is illustrated with a portrait of Mr. Glyn-Jones, tells us that "English druggists are determined business men who know the power they wield, and there will be little use of any manufacturer entering the field unless they comply with legitimate business principles." Further, we are told that "the pharmaceutical papers of England are a much more

independent factor in giving expression and advocacy to a plan of this nature than the American journals."

LONDON UNIVERSITY DEGREES.

Some changes are contemplated in the examinations for B.Sc. and other degrees of the London University. It is proposed to increase the number of subjects in the Intermediate examination, still keeping mathematics, physics, and general chemistry compulsory, and allowing the candidate to take three only of four subjects. The Intermediate M.B. examination is also under consideration.

FAR. LINI AT CAMBRIDGE.

The Nursing Supplement of the *Hospital*, May 15, stated, on the authority of "A Trained Nurse," that 85 lbs. linseed meal in one account was "billed" by a chemist at Cambridge at 11d. per lb. (rather an odd sum), and a single pound (purchased at a chemist's by her to demonstrate at a lecture to make a poultice) was charged 1s. 4d. per lb. The pharmaceutical local secretary (Mr. Alderman Deek), struck by the extraordinary nature of these statements, has inquired at nearly all the chemists in the town (Boots excepted), and he cannot find anyone who owns to such a charge; and as the *Hospital* declines to state, even in confidence, who the "Trained Nurse" is, the local secretary leaves it to chemists generally to draw their own conclusions, in spite of the "Trained Nurse's" final declaration, "I am always very careful to make no statement for which I have not chapter or verse."

LIEBREICH ON KOCH.

At the Medical Congress in Berlin on June 11, Professor Liebreich, who is regarded as the leader of the anti-Koch party in Berlin, stated his theory of tuberculosis as opposed to Professor Koch's. There might be phthisis, he said, without tuberculous bacilli, the reception of which into the system had an injurious effect only in cases where there existed a predisposition to disease, and thus the bacilli were only parasites. It was a radically false method to attempt merely to deliver a consumptive patient from the presence of bacilli. The chief thing was to increase the vital power of the cellular tissue, and he reiterated his opinion that cantharidin is a specific capable of producing this. Speaking of the disinfection of the cellular system, Professor Liebreich stated that essential oil of mustard has this effect, and in summing up he strongly combated the bacillary theory of disease. Several eminent speakers strongly opposed Professor Liebreich's assertions, urging in particular the indubitable successes obtained with diphtheritic serum.

THE YELLOW-FEVER BACILLUS.

At Montevideo, on June 10, Dr. Sanarelli, a distinguished physician, delivered a lecture on the etiology and pathogenesis of yellow fever. He declared the cause of yellow fever to be a bacillus named by him ictteroid, which is rarely found either in the blood of yellow-fever patients or in their bodies after death, as it easily disappeared. The isolation of the microbe is difficult, but bacteriological diagnosis is possible. Twenty-four hours' cultures in gelatine are recognisable without a microscope. The microbe is very deadly to animals, producing when experiments are made a cyclic malady with symptoms and lesions identical with those produced in man—viz., gastro-enteritis, hæmorrhage, nephritis, uræmia, and fatty degeneration of the liver, destroying the hepatic cell-like phosphorus, and thus suppressing the natural defence of the organism. Filtered cultures set up in animals and man the same typical fever. He had made experiments which showed that the acclimatization of the malady on board ship and in damp places was due to the symbiosis of the microbe with mould, a damp atmosphere favouring the microbe's development and vitality. So far the production of an antitoxin, or other means of conferring immunity, has not been successful.

HOME-STUDY IN PHARMACY.

Our New York contemporary, the *Pharmaceutical Era*, has formulated a home course of study for pharmacy students, to which they call attention in this issue, and which seems to merit the consideration of British pharmaceutical educationists, as well as students who wish to take a broader view of pharmacy than is provided within the boards of the British Pharmacopœia. What the *Era* is doing is to get well-known American professors and teachers of pharmacy subjects to write lectures upon the subjects in which they are specially competent, and these will be published in the *Era* week by week for eighty weeks. As only those parts of the course will be American which are directly connected with the "United States Pharmacopœia," the course will be suitable (we should think) for all drug-trade apprentices and assistants who can read English. We specially commend the course to teachers of pharmacy, who will doubtless get many ideas from it. Professor J. H. Beal, Sc.D., Ph.G., is to act as director of the course of instruction.

FIRE ABOARD SHIP.

We have on several occasions recently printed warning paragraphs regarding the dangers of chemical shipments which are alleged to have been the cause of the mysterious disappearance of some vessels, owing to fire breaking out from the chemicals. On this point Dr. John Attfield, F.R.S., writes to the *Times* of Wednesday, with special reference to the burning of the *Micronesia*, which was laden with nitre, and he suggests that, as the chemical substances with which a ship is liable to be laden are in different categories combustibles should be labelled C, fire-feeders labelled FF explosives labelled E, and things dangerous in other ways, labelled D. In principle this CDEF classification would appear to be as simple as ABC itself.

FOR BABY'S BENEFIT.

A few weeks since we commented upon the cleaning of feeding-bottles, and suggested that manufacturers should do something in the matter. The following is a prompt response:—

INSTRUCTIONS FOR CLEANSING MAW'S FEEDING-BOTTLES.

Immediately after use disconnect the various parts of the fittings, and thoroughly brush out the tubes, teat, bottle, &c., with warm water, in which a small quantity of washing-soda has been previously dissolved, rinse well, and then place in a vessel of cold water until again required. In order to keep feeding-bottles in perfect order two are required, one always clean and ready for use.

These instructions, printed in bold type, are placed by Messrs. S. Maw, Son & Thompson, of London, in every feeding-bottle box which they send out. They meet the ease exactly.

EXTRACTING IODINE.

M. Alfred Boudon has invented a new process for extracting iodine from seaweed. The following is an account of it given by an English engineering paper:—

The wet seaweed is immersed for about twelve hours in seawater containing 8 kilogrammes of caustic lime to the cubic metre of water, this quantity being sufficient for half a ton of seaweed. By this operation alone about 65 per cent. of the iodine is dissolved, and by two successive infusions of six hours' duration, more than 90 per cent. of the iodine is abstracted. The mucilaginous matter in the solution is then precipitated by the addition of ferrous sulphate or caustic lime, and the clear liquid containing the iodine may be decanted off. After this has been neutralised by the addition of sulphuric acid, nitric acid is added, and the iodine is then dissolved in petroleum. The practical operation of the process has been very satisfactory. From a ton of seaweed containing 1.040 kilogrammes of iodine 953 grammes were extracted by the new method, or nearly 92 per cent. The residue of seaweed after desiccation showed more than 50 per cent. of organic matter, 10 per cent. of potash, and 37 per cent. of nitrogen, forming an excellent fertiliser.

Perhaps Mr. E. C. C. Stanford may have something to say of M. Boudon's process, which goes along lines created by Mr. Stanford.

WILLS OF DECEASED CHEMISTS.

The will of Mr. Benjamin Sutcliffe, chemist and druggist, Oldham, who died on November 12, 1896, has been proved by his widow, Mrs. Hannah Sutcliffe, by whom the personalty is sworn at 2.700/ 14s. 5d.

The will of Mr. E. H. Dyer, chemist, of Honiton, who died on March 17, is proved in London by Mrs. Elizabeth Dyer, the widow, by whom the personalty is sworn at 844/ 17s. 2d. gross and 478/ 3s. 2d. net.

The will of Mr. J. J. Jary, chemist and druggist, 9 Pier Terrace, South Shields, who died on May 31, 1896, has been proved by his widow and sole executrix, Mrs. Helena L. Jary, by whom the personalty is sworn at 261/ 2s. 6d.

The will of Mr. John Read Dore, pharmaceutical chemist and druggist, Huddersfield, who died on August 23, has been proved by Mrs. M. M. Dore, the widow and sole executrix of the testator, whose personalty is sworn at 366/ 13s. 4d.

The will of Mr. Joseph Robinson Lund, chemist and druggist, 81 Barkerend Road, Bradford, who died on November 20, 1896, has been proved by Mr. Ezra Naylor, of Bradford, the sole executor, by whom the testator's personalty is sworn at 813/ 1s. 6d.

The will of Mr. Albert Archer, chemist and druggist, Gatefield Road, Sheffield, who died on January 1, 1896, has been proved by Mr. Joseph Archer and Mr. John Archer, the brothers of the testator, whose personalty amounts to 591/ 17s. 4d.

The will of Mr. A. U. Allen, J.P., 24 High Street, Lymington, chemist and druggist, who died on May 20 last year, is proved in London by Mr. S. Donau, of Lymington, by whom the personalty is sworn at 1,990/ 6s. 4d. gross and 1,927/ 4s. 4d. net.

The will of Mr. George Botham, chemist and druggist, Brookside, Levenshulme, Manchester, who died on November 20, 1896, is proved by Mrs. Botham, the widow, Mr. G. W. Botham, the son, and Mr. Alfred Champness, the executors. The personalty amounts to 1,226/ 17s. 9d.

The will of Mr. D. P. Saunders, chemist and druggist, Haverfordwest, who died on January 29, is proved by the sons, Mr. C. P. Saunders, chemist, Haverfordwest, and Mr. E. A. Saunders, surgeon, Pembroke Dock. The personalty amounts to 11,485/ 17s. gross and 9,610/ 8s. 11d. net.

The will of Mr. Frank Baker, chemist and druggist, of Sandwich, Kent, who died on December 23, 1896, is proved in London by Mr. Chas. Baker, Market Street, Sandwiche, and Mr. G. T. Baker, of the London and County Bank, Brentwood, the brothers. The personalty is sworn at 1,378/ 11s. 4d. gross and 1,045/ 2s. 5d. net.

The late Mr. William Parker, pharmaceutical chemist, 96 Westborough, Scarborough, having died intestate on October 11, 1895, letters of administration to his estate have been granted to Mr. John Parker, retired farmer, as next-of-kin to the deceased, whose personalty is sworn at 1,678/ 19s. 11d.

The will of Mr. Josiah Pratt, chemist and druggist, 164 Stafford Street, Wolverhampton, who died on January 28, 1897, is proved by Miss Mary Jane Pratt and Miss Sarah Pratt and Mrs. Agnes R. Edwards, the daughters, Mr. John W. Pratt, the son, and Mr. Eli Gould, of Bilston, dry-alter, by whom the personalty is sworn at 385/.

The will of the late Mr. William Geddes, chemist and druggist, 96 Wellington Road, Oldham, has been proved at Manchester by Mr. Horace Paul Geddes, chemist and druggist, 96 Wellington Road, Oldham, and Mr. John Wm. Geddes, of Gateshead, the sons and executors of the testator, whose personalty amounts to 1,162/ 3s. 6d.

The will of Mr. Marshall Leigh, of Brighton, pharmaceutical chemist, a member of the Council from 1889 to 1894, who died on December 8, 1896, has been proved in London by Mrs. Leigh, the widow, and Mr. F. W. Leigh, of Bradford, the brother of the testator, whose personalty is sworn at 2,512/ 15s. 1d. gross and 1,357/ 17s. 10d. net.

The Drug Trade in the Victorian Era.

"ROYALTY is indisposed. The influenza attacks sovereigns as well as subjects. The King, Queen, and the Duchess of Gloucester are all confined to the Brighton palace by severe colds. Of course there has been no gayety and very little company at their Majesties' dinner-table. The principal guest has been the Court doctor, Sir Henry Halford."

It was thus that William IV. entered on the year 1837—to him a fatal year, to his country and its people a momentous one. Sixty years ago to-day (Monday, June 19, 1837) four physicians were round his bedside at Windsor, and their bulletin was destitute of medical detail, but they mentioned that "after transacting his usual business his Majesty received the Sacrament from the Archbishop of Canterbury with attention and great apparent comfort." Henry Halford, M. J. Tierney, Wm. Fred. Chambers, and David Davies signed this bulletin. It was the last time that Sir Henry Halford testified to the King's bodily condition, for next day his co-signatories alone issued the last brief bulletin:—

Windsor Castle,
Tuesday, June 20.

It has pleased Almighty God to relieve from his sufferings our most excellent and gracious sovereign King William the fourth. His Majesty expired at twelve minutes past 2 A.M. this day.

It is not unfitting that we should begin this article with the last record of the last era, because the death of William IV. meant a great deal more to British pharmacy than is generally allowed. Up to the accession of our Queen the officially recognised exponents of the medical profession were physicians, surgeons, dentists, and apothecaries. Chemists and druggists had no legal status, and the best of those who traded as such were trained apothecaries; but for nearly twenty years pharmacy distinct from the apothecary's art had been growing in importance, the business had become specialised, and its objects were definite. Yet it was a medical Ishmael, for it had not legal or

COURT RECOGNITION.

Our young Queen on ascending the throne added a chemist and druggist to her establishment, Mr. Peter Squire

becoming a gentleman of the Royal Household. British pharmacy as a distinct entity is therefore contemporaneous with our Queen's reign, and the fact warrants us in some references to the progress of the craft during the past sixty years. And first in regard to the circumstances which led up to the recognition of pharmacy by Queen Victoria in a way that her predecessors had not done. The man above all others who was responsible for this was Sir James Clark, K.C.B., M.D., F.R.S., whose name is familiar to the latter generation of pharmacists on account of the encomium to

his memory which stands after the title-page of Squire's "Companion." Sir James Clark was physician to the Duchess of Kent from 1834, and also attended upon Princess Victoria. After close personal, but incognito, scrutiny of Mr. Peter Squire and his establishment, he sent his prescriptions for the Princess to Mr. Squire, and in 1836 on his recommendation Mr. Squire was appointed chemist and druggist to the Princess. That may not have meant much, for in the Royal Household there were apothecaries who did such work as Mr. Squire was called upon to do. However, the Princess's respect for Sir James Clark's opinion and esteem for Mr. Squire were so high that when she became Queen she broke through Court precedent by adding Mr. Squire to the Staff of her Household, and from that time the Queen's chemist has done the duties which previously fell to the apothecary. We have always regarded this appointment as one of the highest significance to British pharmacy. The portrait of Sir James Clark on the opposite page is one which we reprint from the *Practitioner*, by permission of the editor; and one



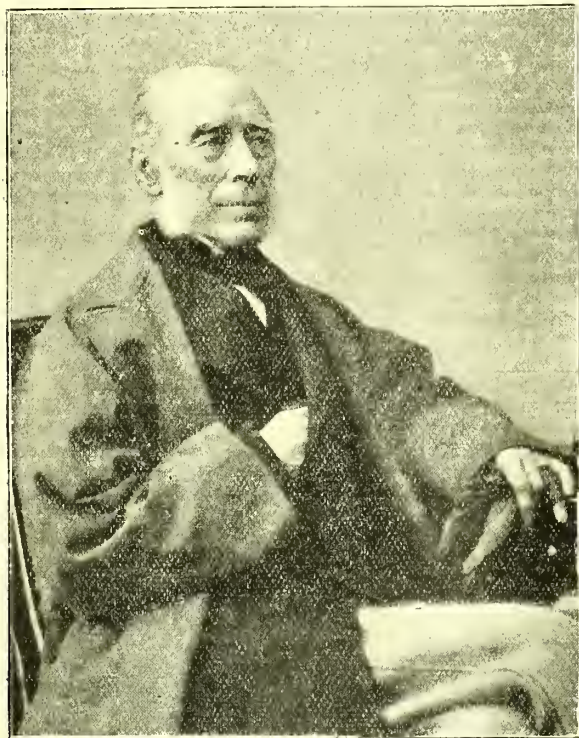
Commemoration Photo by Messrs. W. & D. Downey, Ebury Street, London, W.

Peter Squire
1837 1897

of Mr. Peter Squire, taken in the seventies, is given later on. Sir James Clark was an Aberdeenshire man, M.A. of Aberdeen and M.D. of Edinburgh. As a young doctor (after experience on board ship) he travelled with a consumptive patient, and so became intensely interested in climatology. While spending a summer in Carlsbad he met the present King of the Belgians, and it was through him that the Duchess of Kent selected him as her physician. He died at Bagshot Park in 1870, ten years after his retirement from practice. Court recognition of pharmacy was in a few years followed by

STATE RECOGNITION OF CHEMISTS AND DRUGGISTS.

The Pharmaceutical Society was founded in 1841, and the history of the circumstances attending the formation of that body is narrated in full in Mr. Jacob Bell's "Progress



SIR JAMES CLARK, BART.

(From a Photograph in the Queen's Private Collection.)

of Pharmacy," and was told by us, with special information from then surviving founders, in our issues of April 18 and May 30, 1891, when the jubilee of the Society gave the opportunity. The narrative shows conclusively that in those days—that is, in the early years of the Queen's reign—there were many highly intelligent and influential men among the chemists and druggists of London capable of working together at least as well as we do now with all our organisation, and commanding the respect both of Parliament and of the medical profession. The committee formed at the meeting called to oppose the objectionable Bill introduced into Parliament by Mr. Hawes included about half-a-dozen of the leading wholesale druggists of London, but the rest were retail pharmacists, and the names of many of them are with us to this day. It is worth while once more repeating that list:—

Allen, William, F.R.S., Plough Court
 Alsop, Robert, 15 Sloane Square
 Barron, C., 6 Giltspur Street
 Barry, John T., Plough Court
 Battley, Richard, 32 Lower Whitecross Street
 Baxter, G., 144 High Holborn
 Bell, Jacob, 338 Oxford Street
 Briggs, E., 48 Wigmore Street
 Butler, Thomas, 4 Cheapside
 Davy, Charles, 100 Upper Thames Street
 De Castro, Samuel, 25 Great St. George's Place, Knightsbridge
 Dinneford, Charles, 172 New Bond Street
 Ellis, John, 225 Upper Thames Street

Farmar, Robert A., 40 Westminster Road
 Foulger, Samuel, 133 Ratcliffe Highway
 Gifford, Joseph, 104 Strand
 Green, Samuel, 1 Harleyford Place, Kennington
 Hanbury, D. B., Plough Court
 Herring, Thomas, 40 Aldersgate Street
 Horner, E., 20 Bucklersbury
 Hudson, W. B., 27 Haymarket
 Ince, William, 31 Southampton Street, Covent Garden
 Keating, Thomas, 79 St. Paul's Churchyard
 Lescher, J. S., 4 Cripplegate Buildings
 Lowe, W., 47 Blackfriars Road

Mayhew, Samuel M., Camberwell Green
 Morson, Thomas, 19 Southampton Row
 Payne, C. J., 5 St. Martin's Court
 Pound, M., 198 Oxford Street
 Pigeon, Richard Hotham, 31 Throgmorton Street
 Savory, J., 143 Bond Street
 Simkin, Edward, 2 New Cavendish Street

Smith, Joseph, 29 Haymarket
 Smith, George W., 125 Lower Thames Street
 Squire, Peter, 277 Oxford Street
 Stamper, Ralph, 140 Leadenhall Street
 Toller, John, 18 Conduit Street
 Walker, T., 48 Tooley Street
 Waugh, G., 177 Regent Street
 Winstanley, Edward, 7 Poultry

Mr. William Allen, F.R.S., whose name stands first on the list, was a man of European renown, and he took, we have been told, a considerable interest in the movement; but the active organiser was Jacob Bell, who was then about 30 years of age, and so well did he work that at the first annual meeting of the Pharmaceutical Society, held in May, 1842, it was reported that 2 life members, 982 subscribing members (at two guineas each), and 976 associates (at one guinea each) had been enrolled. The rates of subscription are especially worthy of note in view of the fact that the mere suggestion of such contributions now, when the service of the Society is much more costly than it was then, is received with a scoff.

The Royal Charter and the Act of 1852 recognised the Pharmaceutical Society, but not the trade generally. Some measure to regulate the sale of poisons was sure to come sooner or later, and the work of the Pharmaceutical Society consisted in the guidance of legislators from the point of view of chemists. The Act of 1868 was a statute of very great value to the Society, but it is doubtful whether its administration by the Society has been so effective as if it had always been in the hands of an unbiassed Government Department. However this may be, it remains the fact that next to the legal and medical professions chemists and druggists were the first to obtain direct recognition and definition of their position from the State. The work of Jacob Bell in the promotion of this object cannot be too highly esteemed. He had no personal interest to serve, and he had many temptations to draw him from the trade for whose benefit he contended. He died before he was 50, but his brilliant services to the chemists and druggists of the Victorian period can never be forgotten.



MR. JACOB BELL.

(From a portrait by Sir Edwin Landseer in the Pharmaceutical Society's Collection.)

In the year 1837

PHARMACEUTICAL LITERATURE

scarcely existed apart from the three Pharmacopœias of the Kingdom. The common text-books were Gray's "Supplement,"

Thomson's "Dispensary," Brande's "Manual of Pharmacy," Duncan's "Edinburgh Dispensary," and Phillips's translation of the London Pharmacopœia. Periodical pharmaceutical literature was confined to such publications as the *British Annals of Medicine, Pharmacy, Vital Statistics, and General Science*, which in its short life of ten months, in 1837, did little for pharmacy, except to foreshadow the policy which the Pharmaceutical Society was to adopt four years later; for the *Annals* clearly recognised that the Apothecaries' Company was a pharmaceutical anomaly, and urged the "necessity for its reform and conversion into a college of pharmacy." For this legislation would be necessary, and the lines which the *Annals* suggested that reform should take were:—

Those who practise pharmacy illegally should be prosecuted.

The practice of pharmacy should be separated from medicine and surgery. The only way to prevent counter-prescribing is to elevate the qualification of the chemist and druggist.

There should be an examination, without curriculum, for all entering pharmacy; and competent teachers of chemistry and pharmacy should be appointed in all the large towns of the country, under whom students of pharmacy should have at least six months' work in the laboratory.

These wise remarks fell upon stony ground. All the

branches of medicine were at that time deep in the criticism of the 1836 London Pharmacopœia, Phillips's translation of which was particularly hit. It is curious to note that a Mr. Richard Quain was then Dean of the London University College Medical School. He was the Professor of Anatomy in the College, where another one of the same name was then in his first year as a medical student. The latter, now Sir Richard Quain, we have still with us, and it is he who has had so much to do with the British Pharmacopœia, of which more anon. Immediately before and after the Queen's accession two notable additions were made to the staff of the London University College, Professor Sharpey, one of the most distinguished medical teachers of the century, coming from Edinburgh in June, and Professor Thomas Graham, the first President of the Chemical Society, from Glasgow in September. When Professor Sharpey left Edinburgh he was entertained at a meeting over which one Dr. A. D. MacLagan presided, and he, in the name of the meeting, presented Professor Sharpey with a silver jug. The chairman is now the venerable Sir Douglas MacLagan, than whom no living physician has had more intimate relations with pharmacy during the whole of the Victorian era.

THE PRACTICE OF PHARMACY.

In the centre of a straggling street

One small neat house advanced beyond the rest :
Its window . . . modestly projected from the wall,
Three globes of colour'd liquor faced its panes ;
Whose brilliant hue of crimson, blue, and green,
Looked wondrous pretty ; e'en in day-light seen
By truant children from the fields and lanes.
But in the night three meteors they seem'd ;
For then (with farthing candles stuck behind 'em)
Full in each passing plough-boy's eyes they gleam'd
Threat'ning to blind 'em.

Within his shop, a sightly show to make,
Shone drawers and jars, each with its classic label :
But as the drawers were shut, and jars opaque,
No passenger nor customer was able,
Whether they full or empty were, to tell,
Though Dr. Leech the latter knew full well.
These, with some bullocks' bladders,
And half-a-dozen adders
Preserved in spirits,
Beyond their merits,
With empty phials, a prodigious host,
Were all our Pharmacopolist could boast.

From "Rank Poison" (1819).

A' kinds o' boxes, mugs, and bottles,
He's sure to hae,
Their Latin names as fast he rattles
As A B C.

Calces o' fossils, earth, and trees ;
True *sal-marinum* o' the seas ;
The *farina* of beans an' pease,
He has't in plenty ;
Aqua-fontis, what you please
He can content ye.

Forbye some new, uncommon weapons
Urinus spiritus of capons ;
Or mite-horn shavings, filings, scrapings,
Distill'd *per se* ;
Sal-alkali o' midge-tail-clippings,
And monie mae.

Burns (1785).

Such were the pre-Victorian apothecary and druggist John Wilson, the Tarbolton schoolmaster, who, to eke out his salary, opened a grocer's shop, where he "added the sale of a few medicines," and gave "advice in common disorders at the shop gratis," has been better known as Dr. Hornbook since Burns's satirical pen made him world-famed. He represents the beginning of the modern chemist and druggist. Dr. Leech typifies the apothecary, the poor soul who was neither physician nor grocer, who did the work of both without the pay of either. As this century entered its thirties an important change commenced. Some lucky wight who was content to forego the pseudo-respectability of the apothecary

thought of grafting together the apothecary's knowledge and the grocer-druggist's energetic business habits; and thus a class of chemists and druggists began to arise who were men of culture as well as good business men, who thought of the improvement of their craft.

It is still the fate of pharmacy that men break away from it for the higher branches of medicine when a certain stage



"Physic."

of development is reached; but seventy years ago the tendency of apothecaries as a whole was to treat their true art—pharmacy—with contempt, and do the physician's work. It is such an one who is represented in W. Cole's cartoon "Physic," which we are able to reproduce here through the kindness of Messrs. Evans, Lescher & Webb, who

own a copy of this rare print. This was a fairly typical apothecary's shop of the period. It would be a precious morsel nowadays, with those antique jars which are being silently bought up in Europe for American drawing-rooms.

EXTEMPORANEOUS PHARMACY.

It is still profitable to us to contrast the kind of pharmacy then existing with what we have now. Then the draught period of medication was at its height, and first-class dispensers had a fine thing out of draughts. "Four at two-and-eight" was how an old pharmacist once put it to us as the order of the day when he started business in the West-end about 1836. People expected the doctor to prescribe the four draughts, and were disappointed if they did not get them. The phials which they were dispensed in were those solid hand-made things with roughly-ground bottoms which survive to this day as oil-sample bottles. The label was tied to the neck of each bottle in the manner shown in Cole's cartoon. Pills were not more common than boluses, and the medicine-taking public was fond of anything to liek. Electuaries they adored, and linctuses were the highest expression of elegant pharmacy. There was a second grade of dispensing—that for persons to whom the "four-at-two-and-eight" method meant ruin. For such there were 24 and 32 oz. mixtures (wineglassful doses), which were generally a combination of some infusion or decoction and a tincture or a salt of some kind. Purgatives were frequent and violent, and when they failed the dispenser had to compound a clyster, filling it into a bladder into which he fitted a clyster-pipe, and it was sent out warm for immediate use.

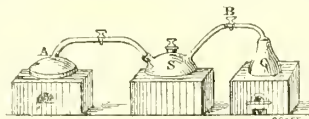
EVOLUTION BEGINS.

Improvement was evident at the beginning of the Victorian era. The great advance which had been made in chemistry had an effect upon pharmacy by the creation of a more observant set of pharmacists. Such men as Anthony Todd Thomson, Pereira, Neligan, and Christison were intelligent pharmacists and competent teachers. Their lectures to medical students assisted greatly in breaking down old prescribing conditions, and in creating more elegant prescription pharmacy. The chemists and druggists of the day were not slow to second these efforts by making themselves equal to the demands of the times, and the foundation of the Pharmaceutical Society of Great Britain was a means of encouraging original observation, which had exceedingly fruitful results for many years. To Mr. Jacob Bell and Professor Redwood the credit of the early pharmaceutical meetings is generally attributed, but there seems to be little doubt that the pharmacist-physicians who were associated with them largely inspired the work. They were experienced in it, and just sufficiently engrossed in their medical work to appreciate the superior facilities of the practical pharmacist to work out pharmaceutical problems.

EXTRACTS.

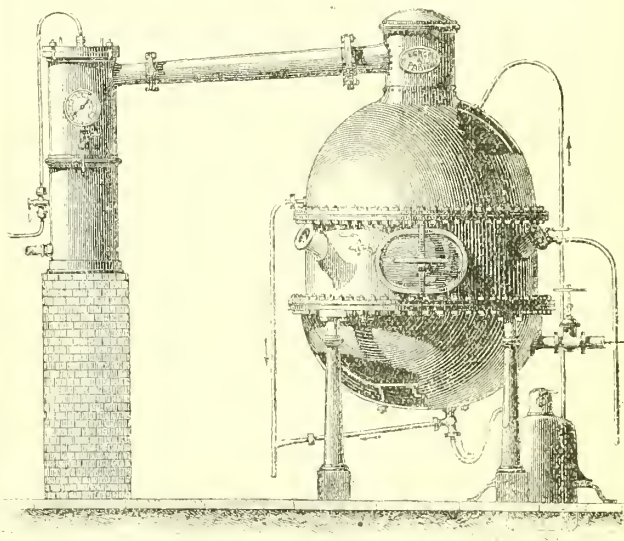
In the early years of the fourth decade no subject received so much and general attention as the preparation of extracts. The discovery of alkaloids and other vegetable principles seemed to suggest to many English pharmacists the more careful preparation of solid extracts of vegetable medicines. Mr. John T. Barry's method of preparing extracts *in vacuo* had not yet been generally appreciated; and Squire, Houlton, Hooper, Twinberrow, and others were recommending extracts to be inspissated by a current of dry air because the resulting products were more active. That method was carried out in the forties by retail chemists, nearly all of whom in a good way of business made their own extracts. The spontaneous-evaporation method died a natural death ere long. Life was too short and microbes too many for it, and the introduction of steam-jacketed pans (suggested in 1812) gave wholesale makers an opportunity which they quickly secured. The vacuum method has never been favoured greatly in practice—at least, by manufacturing pharmacists—for the preparation of pharmacopœial extracts. Mr. Barry got the idea from Mr. E. C. Howard, who patented the vacuum-pan in 1812, and he appears to have applied it to pharmaceutical purposes in 1820, for Christison mentions that he had (in 1840) specimens in his possession presented to his predecessor, Dr. Dunean, by Mr. Barry "between 1820 and 1824, which are still in excellent preservation. . . . The preparation

of extracts *in vacuo* is gaining ground slowly amongst druggists, and is practised in this city [Edinburgh] as well as in London." Barry's paper on the subject was published in 1820, and was noticed in Buchner's *Repertoire* of the following year. Mr. Barry's success in making keepable extracts



This represents the first apparatus constructed by Mr. Barry. He subsequently made one more resembling the modern vacuum-pan; but we print the above because it forms so good a contrast to the apparatus now used for the production of extract of malt (see the next illustration), some of which are so large that forty people could sit comfortably on the flange.

was not repeated by others, and general success was only possible when the fact was appreciated that the micro-organisms contained in the fluids treated were not destroyed in the vacuum-pan. Even now the uses of the vacuum-pan are limited. The process of percolation owing to the work of the Boullays (1833), Guibort and Guilhaumon (1835), Smith (1839), Gilbertson, Deane, and Redwood (1841) seems to have been regarded with curiosity at that time; and,



A modern Vacuum Apparatus, as a contrast to Mr. Barry's original device.

although the Edinburgh Pharmacopœia adopted the process in 1840, it was not until 1864 that the British Pharmacopœia officialised the present hybrid method for the whole country.

LIQUID EXTRACTS.

The most notable outcome of the introduction of percolation was the improvement of the liquid extract, the origin of which, says Professor Caspari, "although generally credited to American pharmacy, belongs more probably to England." Professor Caspari adds that English liquid extracts were known in the United States in 1834, and he thinks that they were introduced about 1832. As a matter of fact, Mr. Richard Battley was the originator of liquid extracts, and we cannot do better than quote his own words about them (*P.J.*, September, 1850):—

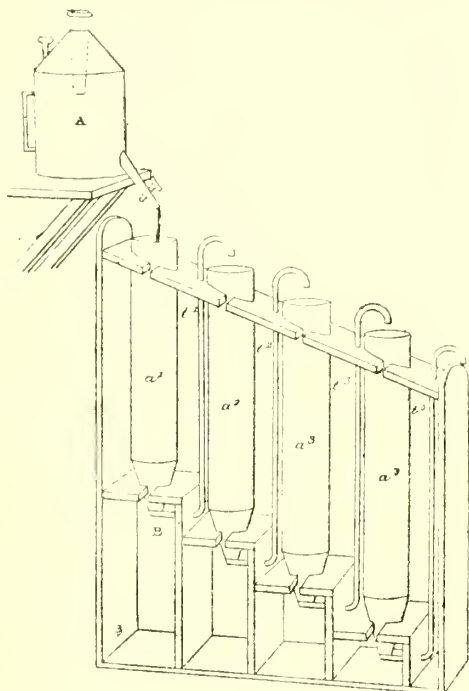
I introduced, in 1818, the form of liquor, or inspissated cold infusion, evaporating the cold infusion at a temperature not exceeding 160 to the specific gravity of 1.200, and afterwards, to preserve the liquid extract from decomposition, adding to it as much rectified spirit as will reduce the specific gravity to 1.100.

This was the starting-point of the fluid extract, which, according to modern notions, should be made by percolation and evaporated little or not at all. We believe that this improved process also originated in this country Messrs. Dunean & Flockhart, of Edinburgh, first making,

in 1842, by percolation, a liquid extract of senna, "every fluid ounce of which corresponded to one avoirdupois ounce of senna." This gave the cue in regard to strength. The process has been continuously employed by the firm since that date, with modifications dictated by experience. The United States Pharmacopoeia of 1850 contained formulas for seven fluid extracts, but it is admitted that one or two of these only were true liquid extracts. Between 1850 and 1860 W. Procter, S. Rotton, E. R. Squibb, H. Thayer, A. Duhamel, I. Graham, and other American pharmacists went thoroughly into the subjects of percolation and fluid extracts, with the result that the 1860 U.S.P. contained formulæ for twenty-five fluid extracts—a number which has since been increased to eighty-eight. The Americans initiated the method now universally recognised in making these preparations—viz., percolating a first or reserved portion, so as to retain the aroma, taste, and active principle unimpaired by heat, evaporating the second percolate and adding it to the first. A distinct improvement upon that process was suggested by E. R. Squibb in 1866, when he proposed the method of

REPERCOLATION

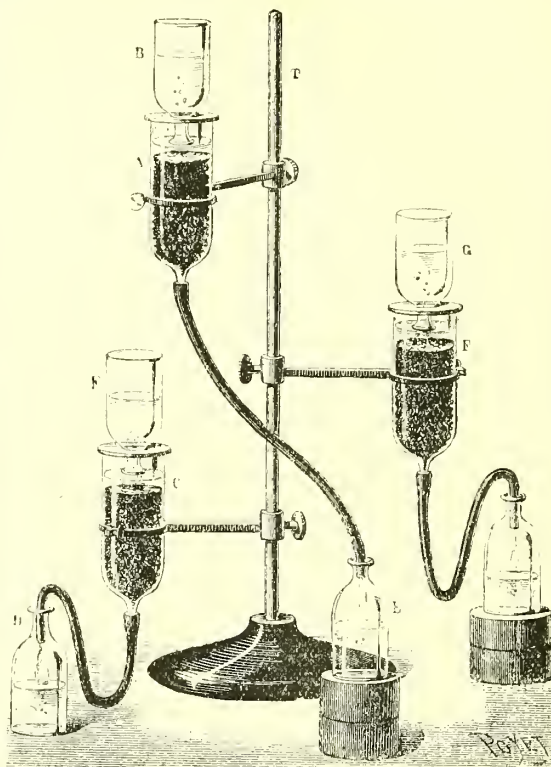
—a system of which he is generally considered to be the originator, but which was patented in France by Varillat in 1856, and the same method was specially recommended by Lalieu, a Belgian pharmacist, in 1862, for the preparation of extracts. However, to Squibb belongs the credit of having



Lalieu's System of Repercolation. Apart from its interest in being the first-sketched series of percolators devised for pharmaceutical purposes, it will be seen that the apparatus is similar to that suggested by Mr. J. A. Forret a few years ago.

worked out the process to a practical success, and of formulating the principles upon which fluid preparations representing from one to three of the drug in one of liquid can be made without evaporation. This is certainly one of the most notable advances of the Victorian era. Akin to it in a measure is the introduction of chemical liquors for the preparation of syrups by Fletcher, in 1879—an idea which has since been much developed. The system of standardisation of galenical preparations, which has within recent years taken firm hold in pharmacy, is directly connected with the efforts to improve the methods of exhausting drugs; in short, standardisation is an ideal combination of pharmacological

operative skill and chemical knowledge of active principles.



Squibb's Arrangement for Repercolation. Dr. Squibb directs that the percolate from A should be passed through C, then through F if need be.

CAPSULES.

The galenical preparations introduced during the past sixty years are by no means numerous. First in chronological order come gelatine capsules invented by Mothes in 1833. They were used in France from that date, became known in the United States in 1837, but were only introduced into England in 1845, at the same time that Savaresse's capsules were introduced. Gelatine capsules are thus a French invention, and to the French the credit belongs of improving the mechanical means for their production. Up till 1886 the manufacture of capsules in this country was confined to a few firms, but since then wholesalers and retailers generally have begun to make them, and many elegant improvements have been effected on them during the past decade, while American pharmacists have perfected empty gelatine capsules for dispensing solid as well as liquid remedies.

PILL-COATING.

The art of pill-coating is supposed to have come to us from France in 1840, when varnishing with tolu and ether was first practised here. About the same time a Mr. W. Palmer is said to have introduced gelatine-coating. In 1854 Mr. A. H. Cox, of Brighton, obtained a patent for coating pills with a solution of a resin, guttapercha, caoutchouc, or gun-cotton in a volatile solvent, and subsequently improving the pills "by dusting them over with powdered French chalk or other powder." The point of Mr. Cox's invention was understood at the time to be the resinous coating, as he claimed as his novelty "the coating of pills and boluses with a gum or resin varnish insoluble in water." Pearl-coating as now understood is the formation of a layer of French chalk upon a thin coating of aqueous mucilage, and this idea seems to have been first carried out by Mr. B. S. Proctor in 1862. Mr. Fuley, of Edinburgh, in the previous year obtained a patent for a coating consisting of albumen, sugar, and tragacanth, and this was the forerunner of the sugar-coated pill. The improvements in the methods for manufacturing pills have been so numerous that one has only to think of

since become one of the most frequently prescribed half-dozen official remedies.

THE BRITISH PHARMACOPŒIA

was authorised by the Medical Act of 1856, and its compilation entrusted to the General Medical Council, who in 1858 recommended the appointment of a committee to prepare the work. Sub-committees for each of the three countries were appointed in the following year. The London one consisted of Sir James Clark, the Queen's physician, Mr. Nussey, Dr. A. B. Garrod, Dr. Farr, Mr. Peter Squire, and Mr. Warrington, of the Apothecaries' Hall. Mr. Squire was the only pharmacist who ever served on the Pharmacopœia Committee with the right of voting—at least, the only one officially admitted to that position, although Mr. James Robertson acted similarly on the Edinburgh committee by appointment of the Royal College of Surgeons there. Professor Christison, Dr. Douglas MacLagan, and Dr. Wilson were the medical members of the Edinburgh committee. The Dublin one consisted of Sir Dominic Corrigan (first President of the Pharmaceutical Society of Ireland), Dr. Apjohn, Mr. Leet, Dr. Neligan, and Dr. Aquilla Smith. The first work of these committees was to codify the three standards of preparations which were to be retained, then to prune down the number of remedies and add new ones. The work was completed in November, 1863, and the first British Pharmacopœia was published as for 1864. An octavo and a 32mo edition were printed, the smaller one selling at 6s. and the larger at 10s. 6d., 28,000 copies of both being printed at a cost of 1,799l., and 4,430l. was paid for "authorship and editing." The more important of the new remedies included in the work were:—

Colloidium
Digitalinum
Extracti liq. (7)
Fel. bovine purif.
Ferri et quinae resina
Lithiæ citras
Podophylli resina
Santonium
Scammonie resina
Succi (3)

Suppositoria (2)
Trochisci (3)

The Pharmacopœia contained some palpable blunders, in spite of the fact that experts constituted the bulk of the committees, and it was no sooner out than criticism assailed it from many quarters. Looking back over more than thirty years one does not fully appreciate the validity of much that was said, many of the critics failing to appreciate the fact that other parts of the country than London had to be catered for, and criticising the compromise work from the P.L. standpoint solely. However, the criticism killed the first B.P., Sir Thomas Watson bringing it to a head by declaring, as President of the College of Physicians, that the new Pharmacopœia was a dangerous work, and recommending medical men not to use it. The Medical Council withdrew the work at a great loss.

SIR RICHARD QUAIN,

who had about that time been appointed a Crown representative on the Medical Council, found his colleagues

somewhat apathetic in regard to the Pharmacopœia, or rather they felt hurt that their well-intentioned efforts should have been greeted with such disfavour, and they did not mean to hasten quickly about another edition. Sir Richard was all for that, because as an old articulated pupil of an Irish surgeon-apothecary he was more of a pharmacist than most physicians of the middle Victorian era. He got the Council to appoint in April, 1864, a committee to consider the matter, which committee consisted of Sir George Burrows (the President), Sir Robert Christison, Professor Sharpey, Dr. Apjohn, and Sir R. Quain. Sir R. Christison acted as chairman, and Sir Richard Quain as secretary. The committee asked Mr. Robert Warrington, of the Apothecaries' Hall, and Dr. Theophilus Redwood, Professor of Chemistry and Pharmacy to the Pharmaceutical Society, to assist them. By this time Mr. Warrington's health was failing him. He had led a busy life as an apothecary and manager of the business and laboratories of the Apothecaries' Company of London, besides taking a keen interest

in scientific research—so much so, indeed, that he was the founder of the Chemical Society, and its Secretary for the first ten years (1841-51). In consequence of Mr. Warrington's poor health the burden of the work fell upon Professor Redwood. Need we say that he was a Welshman, nurtured in high pharmaceutical ideas by Jacob Bell; a splendid pharmacist and a competent chemist, for he was one of the first to avail himself of Graham's lectures when he came to London. He had been on the School of Pharmacy staff from its foundation, and though away from the drug-counter had retained his mastery over the pestle and the plaster-iron.

THE SECOND B.P.

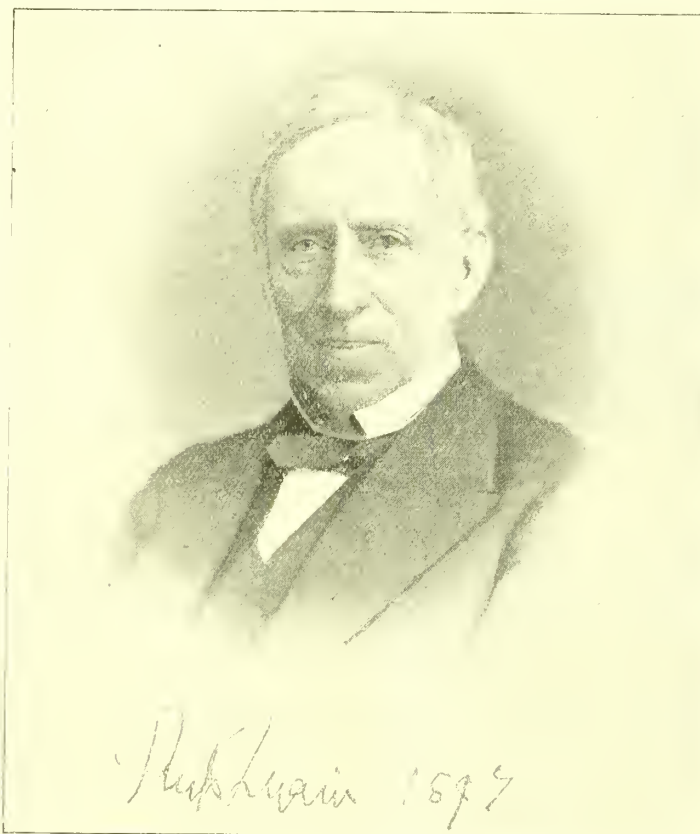
was published in 1867, and was decidedly better than its predecessor. It was better got up, too, a strictly alphabetical order in respect to materia

medica and galenicals being for the first time adopted. The edition was notable also for the restoration of a considerable number of Dublin, Edinburgh, and London preparations which were not admitted into the 1864 B.P., and although few new drugs were included, several important substances and preparations were for the first time recognised, such as—

Acidum carbolicum
Adeps benzoatus
Ceri oxalas
Charta epispastica
Glycerina (5)
Lin. potass. iod. c. sapone.
Liq. bismuthi et amm. citratis

Liquores effervescentes
Lotio hydrarg. nigra
Mistura sennæ co.
Oleum theobromæ
Physostigmatis faba
Sode citrotart. eff.
Sumbul [and tincture]
Vapores (5)

Our comment of May 15, 1867, suffices to express the feeling then existing—viz., "The remodelled and improved Pharmacopœia seems to give general satisfaction, and we have reason to believe that it will rapidly supersede the four Pharmacopœias that are now in use in the United Kingdom."



The words italicised are most significant, since they show the disrespect to the authorised Pharmacopœia; were such disrespect shown nowadays the culprits would be visited by all the pains and penalties of the Sale of Food and Drugs Act, not to mention the inanimate power of the Pharmacy



SIR DOUGLAS MACLAGAN, M.D., F.R.S.E.

Act, which makes the compounding of pharmacopœial medicines by other than pharmacopœial formulæ as great an offence as the sale of poisons by an unregistered person. It is difficult to understand why the British Pharmacopœia was so ignored that a provision had to be incorporated in the



MR. PETER SQUIRE.

1867 Pharmacy Bill to compel registered chemists to adopt it. This was practically equivalent to re-enacting what had already been made law in the 1862 Medical Act—viz., that "the British Pharmacopœia, when published, shall for all purposes be deemed to be substituted throughout Great Britain and Ireland for the several above-mentioned Pharmacopœias."

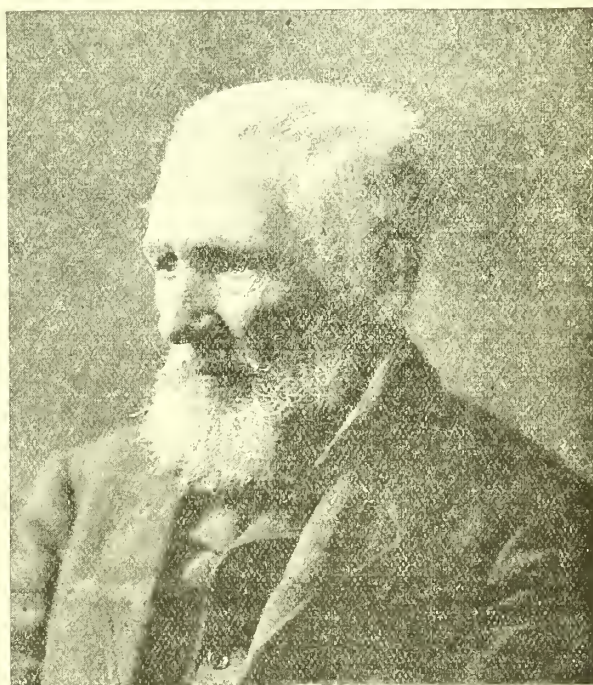
SUBSEQUENT EDITIONS.

In 1874 an Addendum to the 1867 B.P. was prepared by Dr. John Attfield, as editor, Professor Redwood being in poor



SIR DOMINIC CORRIGAN, M.D.

health then, and this helped to fill a gap until, towards 1884, a new edition of the Pharmacopœia became urgently necessary. For some years prior to this much had been said in



DR. THEOPHILUS REDWOOD.

pharmaceutical circles regarding the right of the pharmacist to a voice in the compilation of the Pharmacopœia. When the Pharmaceutical Council (Great Britain) of the day were

requested by the General Medical Council to give the benefit of their advice. The Medical Council's letter was allowed to lie on the table. The Pharmaceutical Council was clearly in a "pet"—so much so that they got up exceedingly effective petitions to Parliament, upon a medical Bill then before the House, for the equal recognition of pharmacists in the revision of the Pharmacopœia. That came to nothing, and there



MR. ROBERT WARINGTON,
F.R.S.

was a feeling of surprise in official circles when it became known that the Society's three professors—Attfield, Bentley, and Redwood—had been engaged to edit the new Pharmacopœia. It appeared in 1885, and was as liberally criticised as the 1864 one, the temper of the time inciting this, apparently. Next came an Addendum in 1890, which was prepared by Dr. Attfield, who by this time had succeeded in healing the breach between the two Councils, so that the Pharmaceutical Council appointed a committee to assist in preparing the Addendum. When the Medical Council resolved to publish a third edition of the B.P. (which is

now in the press) the Pharmaceutical Council again agreed to render assistance, and the results, from all that we have heard, are to be satisfactory. Acknowledgment should be accorded to Dr. Attfield for the hearty manner in which he has taken to work which is, in a certain sense, honorary to a busy professional man. He commenced the system of annual reports on pharmaceutical progress, and has so systematised the

work of revision that future editions ought to be produced with greater facility than hitherto. But his work was in 1895 assailed by medical malcontents who declared that the British Pharmacopœia was becoming a pharmacist's Pharmacopœia, and, as the result of an agitation fostered by a medical journal, the committee of the Council was in 1895 recast, midway in the work of revision, a medical secretary was appointed, and experts were again called in to advise the committee upon botanical, chemical, pharmacognostic, and therapeutic matters. The only point now remaining of pharmacopœial history is in respect to

THE NUMBER OF BRITISH PHARMACOPŒIAS

which have been issued since 1864, and by the courtesy of Messrs. Spottiswoode & Co. we are able to give the figures, viz. :—

1864 edition	...	...	28,000 copies
1867 edition	...	...	40,000 "
1874 Addendum	...	...	15,000 "
1885 edition	...	...	40,250 "
1890 Addendum	...	...	15,000 "

This chapter of Victorian era pharmaceutical history ought not to close without mention of the distinct influence for good which the Pharmacopœias of the United States, Germany, the Netherlands, and Switzerland have had upon the British Pharmacopœia. In spite of the failure to establish an International Pharmacopœia, that movement (which died a natural death in 1885) has had one paramount influence—viz., to lead the pharmacopœial compilers of each country to make potent preparations going by common names as near as possible of uniform strength, so that international dispensing will always be safe medication.

SCIENCE.

DURING the past sixty years a remarkable differentiation has taken place in those branches of knowledge and research which by common acceptance are termed science. Here we can only deal with those branches which are related to the art of pharmacy, but, it may be noted, the men who in 1837 were at the top of nearly every branch of science were graduates in medicine almost without exception. This is as true of pharmacy as of chemistry, botany, and physics—the last then almost ignored as a special branch of science. At that time the Royal Institution was the only non-medical scientific body in London, saving the Royal Society, the Linnean, Geological, Zoological, and Geographical, which, however, were not teaching bodies like the Institution. William Thomas Brande was professor of chemistry at the Institution, Michael Faraday being Fullerian professor in the same subject and director of the laboratory. Oxford University had no separate chemistry chair at that time, botany and chemistry being combined, and Daubeny, one of the founders of the Chemical Society, filled the chair; Cambridge had a professor for each subject—both were clergymen, and both lectured once a year. So regardless of the sciences were our ancient seats of learning then. The Scotch universities were better off. Thomas Clark, M.D., the originator of the celebrated soap-test for hard water, was professor of chemistry at the Aberdeen University; T. C. Hope, M.D., a gifted lecturer, held a similar position in Edinburgh, with a salary close upon 2,000*l.* a year; and Thomas Thomson, M.D., was professor of chemistry in the Glasgow University, having as a colleague Sir W. J. Hooker, the professor of botany. Across the water Pelletier was acting as assistant chemist of the Paris School of Pharmacy, and Gay Lussac was drawing salaries amounting to over 1,600*l.* for six scientific offices, including three professorships. Scientists could look after No. 1 then as well as now. We may not, however, follow too closely the educational aspects of science in 1837; but the fact cannot be overlooked that the University of London Bill passed through Parliament that year. It would be ridiculous to attempt to follow in detail the progress of

CHEMICAL SCIENCE

during the Victorian era, and even its practical applications in the broadest sense are such as to beggar description in short space. One recalls that in the thirties a few medical

men who became specially interested in chemistry carried their studies beyond the requirements of their examinations; but there was little to encourage them to go on with the studies, since the demand for practical chemists was almost non-existent, and chairs of chemistry were rare. At any rate, to most people chemistry was purely a theoretical science, and all except a few favoured students had to be content with the experiments which their teachers performed in their sight. The idea of allowing students to experiment for themselves did not occur to anyone in this country until Dr. D. Boswell Reid, of Edinburgh, held practical classes in the Edinburgh University in 1832. To him is due the credit of starting practical chemistry teaching in this country, and we mention with satisfaction that he was one of the first honorary members of the Pharmaceutical Society. So was Dr. Thomas Graham, who, in Glasgow, before his removal to London had followed Reid's example; when he came to London, in 1837, he found the laboratory accommodation of University College inadequate for class teaching, and took a few only of his best pupils until the Birkbeck laboratory of the College was opened in 1846, a year after the College of Science was opened, and three years behind the Pharmaceutical Society, which had started a teaching chemical laboratory in 1843—the first public one in London. At that time notions of chemical laboratories were not expansive. Here we show a picture of the Royal Institution laboratory which Professor Brande "selected for description on account of its completeness and convenience; it comprises all that can be required in the pursuit of experimental chemistry." To save words we need only refer for a contrast to our last Winter Number, where the Davy-Faraday Research Laboratories attached to the Royal Institution are described and illustrated.

THE TEACHING OF CHEMISTRY

developed with the progress of the science, but in the earlier years of the Queen's reign this statement is truer of Germany than of Britain. Dalton, in 1837, had seen his best days, and at the highest was a distinguished amateur. We had many other thorough chemists then, but their professional or bread-and-butter interests were not solely chemical. Not so in Germany. There such men as Liebig had begun to establish individualistic schools, and Liebig's visit to us in 1837

gave an impetus to chemical study which must have been gratifying to such men as Graham. English students began to flock to Giessen, where Liebig lectured and demonstrated, and from that year we may date the rise of a new era of chemistry in this country, because most of the students came back to act as teachers. The foundation of the College of Chemistry, in 1845, with Hofmann as its principal, gave impetus to the cause, which, with the establishment of Government laboratories, University colleges, technical schools, and research laboratories, represents a movement that, taken in the mass, is honourable to our country even in its incompleteness. We are a slow people—slow to get rid of old methods which curb the new ones that we adopt: the existence of the old is the blot upon English applied science.

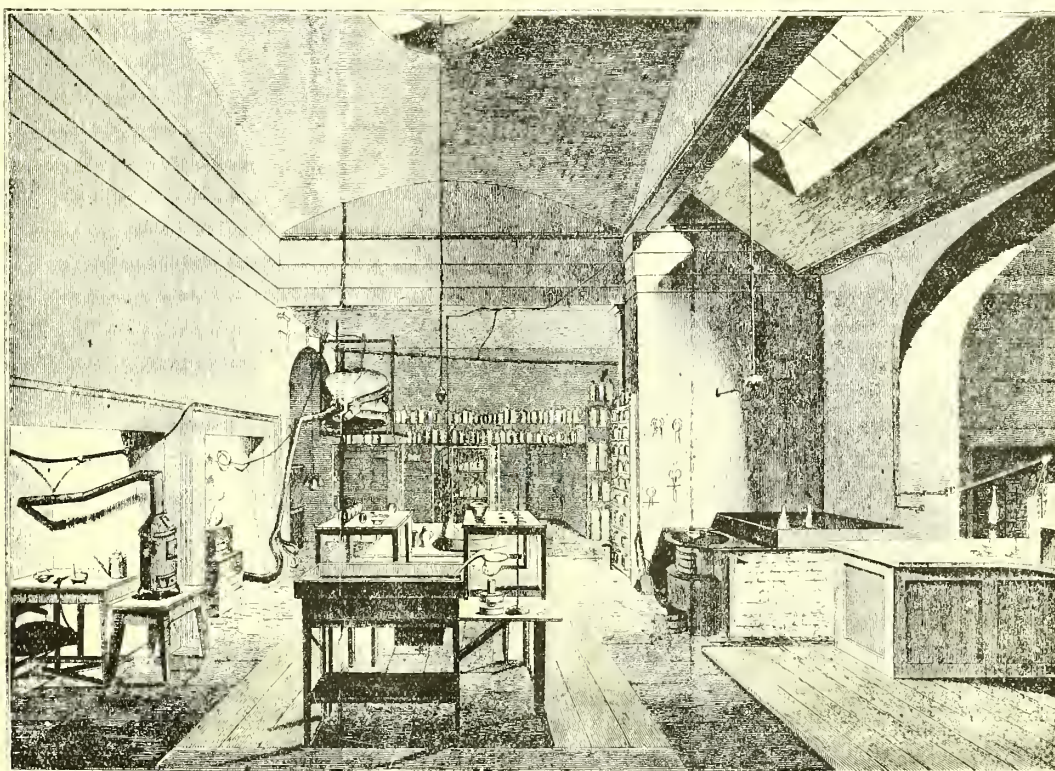
THE FOUNDATION OF THE CHEMICAL SOCIETY

in 1841 fitly marks a new era of chemical research in this country. Even in that foundation the influence of physics appears, a large proportion of the founders being M.D.'s or men

then working—it was greatly an acid groove, which seems to have been a reflex in a measure from the alkaloidal discoveries of the decade, although it also shows the first attempts to break down natural organic complexes into simpler bodies, much in the same manner that modern chemists treat camphor and the like. Amongst the

WORK PUBLISHED IN 1837

was that of Liebig and Wöhler on amygdalin and the preparation of amygdalic acid by the former; Dumas prepared a peculiar acid from indigo, which he called picric acid, and gave indigotic acid a new name—anilic acid; Pelouze and Liebig isolated ceanothic acid, and the former was studying the action of sulphuric acid on glycerine while Fremy was doing the same on tartaric acid, his research resulting in the preparation of sulphotartaric acid. Several other similar researches of less importance were recorded that year, and in regard to alkaloids we note a few discoveries where it is hard to believe that alkaloids existed; but Gunther succeeded in preparing pure theine for the first



THE ROYAL INSTITUTION CHEMICAL LABORATORY IN PRE-VICTORIAN TIMES.

connected with pharmaceutical chemistry, and differentiation has proceeded so far that nowadays these classes of persons are more frequently put on the blackballing lists than any other. The Society's Jubilee celebration six years ago gave us an opportunity of putting on record the principal facts in the Society's history, and we need not now go back upon that. Up to 1841 chemists had done comparatively little work in organic research, and knowledge of the products of the animal and vegetable kingdoms was limited in quantity and mixed in quality. But if little had been done in that direction, very much indeed had been accomplished in inorganic chemistry before the forties, so that the chemists of that day were as expert in metallic separations and such-like as those of to-day. Nearly all our analyses of mineral waters date from that period, and not a few of our stock analyses of alcoholic liquors. Still the researches on organic compounds were by no means unimportant, and it is not difficult to draw a straight line from that time to now showing the connection between the chemical discoveries of 1837 and the chemical theory of 1897. The best work of the former year gives a fair idea of the groove in which chemists were

time by the magnesia process, the alkaloid obtained by Oudry ten years earlier having been impure. Chemists were then on the threshold of many important discoveries. Benzene was called *phen*, in a happy moment of inspiration that it was the nucleus of a vast array of compounds yet to be discovered. Before proceeding further, attention should be called to the

ALKALOIDS AND OTHER ACTIVE PRINCIPLES

which were known fifty years ago, as there have been few discoveries so influential upon medicine and pharmacy as the isolation of these substances. There are now some hundreds of them, and their investigation by pharmaceutical chemists of all countries has produced highly valuable chemical data. The first glimmering of alkaloidal existence was obtained by Derosne in 1803 with the recognition of an alkali-like base in opium, but the following are the definite discoveries up to the wake of the Queen's accession:—

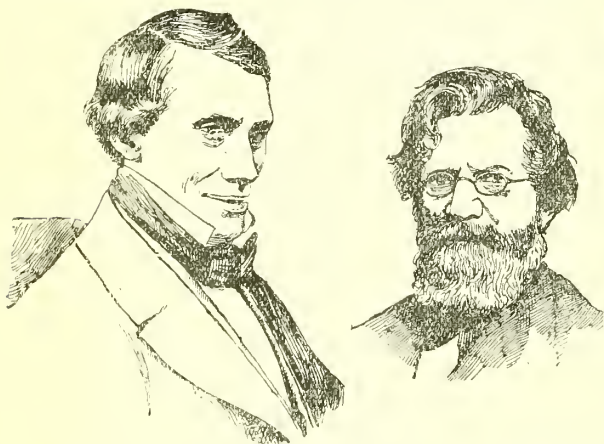
1805-17 Morphine	1819 Piperine, delphinine, and brucine
1817 Narcotine	
1818 Veratrine, strychnine	

1820 Quinine, cinchonine, solanine, and caffeine	1829 Arieine and sanguinarine
1825 Chelidonium	1832 Codeine
1826 Corydaine and berberrine	1833 Quinidine, atropine, hyoscyamine, aconitine, colchicine
1827 Conine	1835 Pseudomorphine and thebaine
1828 Nicotine and curarine	

Besides these the alkaloids, glucosides, and neutral principles now recognised by the British Pharmacopœia may be mentioned:—

1810 Cantharidin	1860 Cocaine
1830 Salicin and santonin	1863 Physostigmine
1831 Elaterin	1869 Apomorphine
1851 Aloin	1875 Pilocarpine

The discovery of physostigmine by Dr. T. R. Fraser recalls the fact that about that time he and Dr. Crum Brown commenced a classical investigation on the relation between chemical composition and physiological action, the effects of



DR. THOMAS GRAHAM, F.R.S.

DR. A. VON HOFMANN, F.R.S.

which really led up to the discovery of apomorphine by Matthiesen and Wright, and the establishment of the correlation which they formulated has influenced a great deal of the research from which synthetic remedies have emanated, but the field of the researcher has been shifted to Teutonic soil.

CHEMICAL THEORY

has undergone many changes. Lord Kelvin has given us a theory of matter which the mind can grasp; John Newlands, Mendeléeff, and Lothar Meyer have fixed the scheme of elementary creation so that we know the substances which have to be searched for; and, since 1837, seventeen elements at least have been added to the list, and that more will be added every-

one believes, while chemists have yet to work out Crookes's theory that meta-elements exist, since the element-making furnace did not cut off her molecules sharp and even. Knowledge of the atomic properties of the elements has been enhanced by the extension of Dalton's law, the establishment of valency, redetermination of atomic weights, development of Berzelius's constitutional formulae, re-casting of the notation on the hydrogen-unity basis, and such brilliant conceptions as Kekule's benzene ring, not to mention more recent theories about ionisation and the like, which are making a new history for us. While chemical theory has been advancing

TECHNICAL CHEMISTRY

has been created. The United Kingdom has seen its alkali-trade grow to colossal proportions, thanks to her coal and salt rather than to her acuteness of perception, which, indeed, is so poor that, while her sons discovered artificial dyes in the fifties, she now gets her dyestuffs from Germany. Other things have slipped from us, but the main fact to be remembered at present is that when the history of the nineteenth century comes to be written the latter part of it will be found to contain at least nine-tenths of the chemical discoveries, and nearly all the advance in organic chemistry.

BOTANY

also has improved, but that chiefly on the biological side. In 1837 Schwann was studying cells as hard as he could, and one result of his work was the discovery of pepsin in that year. To-day there is nothing that interests biologists more than the action of enzymes in vegetable and animal metamorphosis, and these peculiar bodies are likely to be as prolific of changes as vital force was at one time. The perfection of the microscope has been the botanist's means of progress these sixty years, just as the introduction of the spectroscope, the polariscope, and other optical and electrical instruments has immensely aided chemists.

PHYSICAL SCIENCE

has virtually been created during the past half-century. Electricity has been harnessed to man's impotence, and has made him more powerful than steam. Need we put down what we owe to it? Talbot Fox's photographic pictures were still a curiosity when William IV. was with us; now, through the agency of sensitive gelatine, we catch a picture of the cannon-ball in its flight, reproduce the surging movements of a crowded street, and fix distant stars which the human eye aided by the telescope cannot see. These accomplishments represent a world of painstaking experiment, and from the daguerrotype to the radiograph we have a congeries of light-studies which is eloquent of research in one of the most subtle branches of knowledge. Even man's own position in creation, the origin of his mind, and the limits of his intellectual powers have been fixed for him by the Darwins of the Victorian era. And the contemplation of all the advances of the period proves to us that mind has triumphed over matter.

MEDICAL PRACTICE.

AN old country doctor, whose staples were black draught, blisters, tincture of valerian, and calomel and jalap, used to allow the writer to stir his plaster-pot, and when experience had dispelled the mystery which enveloped the dispensary the old man would recall his student days—how he had served a faithful apprenticeship to a surgeon, then attended a famous medical school, and duly passed his examination. The examination part of the anecdote was interrupted with a hearty "Ha! ha!" as the old man remembered that it was half-past 10 on the steeple clock when he went into the examination-room, and it was striking 11 when he came out with his diploma. Yet a good practitioner he was, who knew his drugs so well that he got along with a few of them, and he could spread a plaster or blend an ointment with as much facility as he brought a child into the world.

Few of that race remain. We have as good practitioners, but none who know their Pharmacopœia so well, or who are so familiar with drugs in the crude state. Indeed,

PHARMACOGNOSY

is now medically tabooed, and many medical students learn all of it they want in an hour at a pharmaceutical museum. This is in strange contrast to the condition of things sixty years ago, when it was written "one of the finest collections of cinchonas in Europe is in possession of Dr. A. T. Thomson." The pharmacognocists of this country at that time were all medic 1 men, and they were collectors. Pereira, Ainslie, O'Sha gnessey, Royle, and Christison were amongst the chief workers in materia medica who were equally competent in other branches of medicine. Chemists and druggists began to have a look in in the forties, and they also made collections. The wonder is how they did it, but the old portrait of Mr. Henry Deane which is printed on another page tells that. There were many, in the old days, like Mr. Deane; but in no period of medical history have we had such a patient investigator as Mr. Daniel Hanbury, whose researches in materia medica earned for him the distinction

of F.R.S., which has not since then (1867) been granted to anyone else for the same kind of work. With such a monument of his labours as "Pharmacographia," in the possession of most pharmacists, little need be said regarding the nature of his work. What should particularly interest everyone who is thoughtful is that the race of which Hanbury was one is lapsing, and the work is falling into the hands of professional men. There is not the leisure now in practical pharmacy for materia-medica research, and those who love it have to be content with the histological side. There is another reason for the change—viz., that

CHEMICAL REMEDIES

have enormously increased in number during the past forty years, and therapeutists have determined with exactitude the actions of many of them. Exact and prompt results are necessary in treating acute diseases. That is a lesson which has been learnt during the Victorian era, for at the



DANIEL HANBURY, Ph.C., F.R.S.

beginning a waiting policy was frequently the only alternative to bleeding, blistering, or starving treatment. Diagnosis has, of course, advanced rapidly, for anatomical knowledge is much greater, and physiological facts have become known which pre-Victorian doctors were not aware of. The all-important fact for us, however, is that physicians, especially during the past twenty years, have really tried to free themselves from traditional physic, and to employ remedies which have a specific influence. Opium, and occasionally henbane, were the chief narcotics sixty years ago. We have a host of such medicines now. Liebreich's introduction of chloral hydrate in 1869 is unquestionably one of the most important events in therapeutics of our period. For good and evil it has played a big rôle these twenty-eight years, and alongside it bromides have been as beneficial for neurotics. Besides these the later synthetic hypnotics are of feeble power, but there is scarcely one of them which has not some special distinction which places it above its fellows—e.g., paraldehyde for the mentally afflicted. The introduction of alkaloids has narrowed the applications of the drugs from which they are obtained, but that has been compensated by better knowledge of when not to administer the active principle. To the chemical study of alkaloids, especially the endeavour to make quinine artificially, we are indebted for a number of important synthetic remedies—antipyrin, and all of that ilk—the first of which (kairin) came in 1883. And the number will go on increasing as chemists, working with physiologists in the light of Brown and Fraser's researches (previously referred to), find how the substitution of one "rest" for another in a molecule brings a compound into touch with some nervous centre previously unassailed. Apart from the modifications of treatment which

have been induced through newer medical weapons, there has been, as Professor Leech has pointed out in the *Practitioner*, remarkable changes in the

PRINCIPLE OF THE PRACTICE OF PHYSICS.

Sixty years ago diseases were looked upon as entities to be directly attacked and overcome by remedies. They are now regarded as evidence of changed functions of various organs, and the physicians' efforts are directed to find agents which will restore to these organs their proper functions, or remove the cause which induces the change. They do indeed meet disease directly by remedies, but always with a knowledge that the effects produced are the outcome, not of the antagonism of the remedies to the disease, but of their influence on some altered functions or the causes leading to the alterations, and in our search after new remedies we now look, not so much for "specifics" as for agents capable of controlling functions or antagonising the causes which lead to their disturbance. Our knowledge of the method in which drugs affect function has advanced greatly during the past sixty years, and is being continually added to by pharmacological research.

Of all the influences which have brought about these changes,

THE GERM THEORY OF DISEASE

must take first rank. Its origin may be traced to the early studies on the cell by such men as Robert Brown, Scheiden, Schwann, and Martin Barry. These studies had no direct relation to bacteriology; indeed, it was not until 1837 that micro-organisms were associated with disease by any observer, although physicians of an imaginative turn have always found wriggling creatures where they should not be. But in the forties bacteria began to be identified and spoken about, and by 1857, when Pasteur entered the field, medical men were thinking about the matter, one direct result being the introduction of antiseptic surgery by Lister in 1865. From that time the study of bacteriology has advanced by leaps and bounds, and, to state the result broadly, it is now recognised that many infectious diseases are caused by the growth in the body of micro-organisms which in the process of life produce toxins, that may mean the death of the body they live in, and sometimes of themselves. This study has led to much work in bacterial culture, a branch of research in which Koch has been one of the best exponents, and as the knowledge of this culture advanced

ANTITOXINS

were produced which have been applied to the cure or warding off of bacterial diseases, following Jenner's plan of vaccine inoculation for smallpox. Dr Sims Woodhead has remarked that "with the mere discovery and isolation of micro-organisms the treatment of disease made little advance beyond the point to which Jenner and Pasteur had brought it, and it was not until 1886, when Salmon and Smith showed that just as the products of active or virulent bacilli were capable of inducing very severe symptoms of septic poisoning, so the products of attenuated bacilli, if injected into an animal, can confer a degree of protection against the action of virulent bacilli, almost if not quite as great as that obtained when the attenuated bacilli are themselves injected. This fact, along with Sewall's observation on the immunity produced by gradually increasing doses of virulent cobra poison, and the observations of Von Fodor and Nuttall on the bactericidal action of blood, and especially of blood serum, made in the following year, opened up the way for the antitoxin treatment, which, in 1891, or only five years later, was being carried out on both tetanus and diphtheria in certain of the Berlin hospitals." During the six years which have since elapsed, several antitoxin remedies have been added to materia medica, and as time goes on more will be added. Another quite recent advance is the introduction of

ANIMAL EXTRACTS

as remedies—that is to say the utilisation of certain parts of animals, glands mainly, for the treatment of disorders more or less connected with the glands, from which the extracts are prepared. Dr. Dujardin Beaumetz inaugurated the treatment by taking testicular extract in his old age, and showing the Paris Academy of Medicine the rejuvenating

influence it had upon him. This was eleven years ago, and Beaumetz appears to have been influenced to a trial of his elixir vitæ by the records of the ancients who were partial to the eating of certain abhorrent parts of animals. However, science seemed to be on his side, for physiologists about that time were concerning themselves with the functions of the human glands, which have always been more or less a mystery; and Professor Vivian Horsley found that the extirpation of the thyroid glands resulted in the production of myxœdema, also that the transplantation of a healthy thyroid into a myxœdemous animal restored it to health. This was followed by Murray's discovery that the hypodermic injection of a thyroid extract cured myxœdema and cretinism, and the new fact was quickly added to by other observers, with the result that thyroid feeding is now a common thing, and all the available glands of the body are used for one purpose or another. We cannot think that this treatment is aught else than ephemeral, because, as knowledge of the physiological functions of the glands increases, the action of natural medicines upon the glands will be better ascertained and applied with greater surety. One last phase of medicine may be referred to before we proceed to another subject, viz:—

THE ABORTIVE TREATMENT.

Many will be able to recall what happened to rheumatic fever patients twenty years ago. The slow treatment with alkalies and actea internally, and laudanum stupes externally, kept them on their backs for months, and they frequently

rose from their beds crippled for life. Such a thing would not be tolerated now. MacLagan's use of salicin in 1876, and the introduction of sodium salicylate immediately after, have shortened the treatment to a few days. MacLagan's application of salicin is based upon the germ theory, and it is probable that in the near future all fevers, instead of being allowed to run their course (provided the patients' strength is equal to that), will be cut short by the discovery of appropriate antipyretics. The same tendency applies to bacillary diseases of a slower nature—consumption, for example. In regard to phthisis we have not yet been able to get rid of the notions of sixty years ago that it is an incurable disease. We cannot rely solely upon medication in such matters, for we now appreciate fully how much

HEALTHY SURROUNDINGS AND SANITATION

influence the course of disease. Repeated visitations of cholera to this country inaugurated an era of improved sanitation, beginning in 1847, and that was going on quietly when Prince Albert died of typhoid fever in 1861. Impetus was given to study of sanitation on the medical side, and since that time an entirely new class of specialists has arisen—medical officers of health. They are now giving the keynote for the future war with disease, and that is prevention. In this work pharmacists will have a part far higher than the sale of disinfectants; indeed, pharmacy has already given to preventive medicine some of its most intelligent exponents.

THE BUSINESS SIDE OF PHARMACY.

WHEN we touch the routine of the drug-trade we come to certain points which interest all men—viz., hours of labour and scale of remuneration. In respect to these the Victorian era shows both improvement and retrogression. In 1837 hours everywhere were long; in the heart of the City of London, from 7 in the morning to 11 o'clock at night was the usual day's darg, and all Sunday the shops were kept wide open, with lights full up at night. The first change was effected by that giant of pharmaceutical reform, Mr. Jacob Bell, who, late in the forties, attended an early-closing meeting at the London Coffee House, Ludgate Hill, and heard all that druggists had to say without saying much himself. The meeting, by the way, was held at 6 o'clock in the morning. Mr. Bell declined to sign an early-closing agreement, because he went one better by putting up the shutters of his Oxford Street pharmacy at 8 that night, the door only being kept open an hour later. Sunday-closing has always been the rule in that establishment, for Mr. John Bell, the founder of the business, was a Friend. The example set by Bell's was followed by others, and now it is the exception to find a family business in the first rank, in any part of the country, which keeps open after 8 o'clock on week-days or caters for trade on Sundays. We do not overlook the fact that Sir John Lubbock has made some gallant attempts to get a Bill through Parliament for making early closing compulsory, but that is a reflection upon a minority of the trade rather than upon the mass, who find that there is no diminution in receipts on account of early closing.

Although the old hours for open shop are maintained in some places, the spirit which underlies early closing is respected by the system of shifts, which brings the actual number of hours put in by employes within the average of the early-closing establishments. That further and general improvement will be effected in the near future everyone anticipates, but there is reason for saying that there has been distinct advance in this respect during the Queen's reign.

PRICES.

The question of the remuneration of the pharmacist is not one upon which a writer can become enthusiastic nowadays. Records which we have published from time to time clearly indicate that there was trouble in the drug-trade at the beginning of the sixty-years' era, cutting of prices being noticed then. But it is undoubtedly the case that up to twenty-five or thirty years ago the volume

of profit in pharmaceutical trading was appreciably higher than it is now. This was due partly to the consumption of medicines being greater, and partly to the system of prescribing being more liberal, while the comparatively small spirit-duty left the chemist and druggist a larger margin of profit on all the alcoholic remedies which he sold, and they bulked largely in his returns. Messrs. Kay Brothers (Limited), of Stockport, have been so kind as to lend us a retail price-book of 1839, which admirably supports the last assertion. In it tinctures are, with few exceptions, marked 4*l.* and 6*l.* per oz., the prices now obtained in many parts of the country for proof and S.V.R. tinctures; but in 1839 rectified spirit cost about a third of what it does now, and the active ingredients of the tinctures were, in the large majority of cases, no dearer, and in some instances cheaper, than at present. Examining Messrs. Kay's list we find that the 1839 prices were substantially the same as those, say, of 1879, for an average middle-class business. A few were higher, some lower, but on the whole the chemist of sixty years ago obtained his "schent. per schent." with little trouble, and as his working expenses were less than those of the chemist of to-day, his net profits must have been larger. Other aspects of this question we leave to inference, although the more significant of them are dealt with later. While the whole trade was preparing for the revolution in qualification which gave chemists and druggists a legal footing, a revolution of not less significance on the commercial side of the craft was in preparation, for it was about 1868 that the Philistine store came into our ranks in the shape of a West of London Co-operative Association, which applied to pharmacy exactly the same trading principles as are applied to the sale of butter and broadcloth. This was a distinct novelty—a breaking away from tradition which could not fail to alarm the fathers of the craft. In this case there was no David to slay the Philistine, and the artillery of legal procedure left him in a more secure, because defined, position, which others of the same tribe were not slow to take advantage of. It would be waste of space to enter into details on the consequences, for they are known to everyone who has heard of the P.A.T.A.—an organisation which professes to deal only with the least profitable part of the drug-trade, and that part in which the skill and knowledge of the chemist are not exerted. Generally speaking the latter part has not suffered by the revolution so severely as the former, nevertheless the profits on retailing non-proprietary medicines have diminished, and the demand for the medicines has not increased. The position in 1897 as compared with 1837 may be expressed as one of

energy in contradistinction to the easy-going policy of sixty years ago. The chemist of the earlier period had a certain number of customers, and rarely dreamt of getting more. He made a good living out of it, and hoped to retire when he was threescore and ten. The chemist of to-day who wishes to make money must be a hustler, and make business; he makes profit by striking out into new or original lines, by pushing sales, by "quick returns," and he reckons upon retiring before he is 60—earlier if possible—for he knows that his business saps his energies, and then there is not for him that peaceful old age which his forefathers in the craft enjoyed. That there is a higher, more intellectual, more professional section in the trade we do not deny, but few there are who reach their ideals with affluence as an accompaniment, and most that succeed in the higher path have to thank an inherited reputation as much as their own acumen.

THE EMPLOYÉ.

The condition of the employé has meanwhile sensibly improved. The seven years' apprenticeship, almost universal fifty or sixty years ago, has steadily shrunk to one of four or three years, and the indoor system has been abandoned in some parts of the country. The shortening of the apprenticeship is not peculiar to pharmacy; other shop traders and many crafts have found it necessary to cut two or more years from the seven which had become traditional. The introduction of machinery has been the reforming influence in this direction, but in pharmacy the need for a period of scholastic tuition warranted older firms in submitting to the new departure. But these are the very firms which no longer take apprentices; that important duty is left to those in a small way of business—to men who need cheap labour—and the result is that scores of young men are now turned on to the market every year who have yet to learn the most important part of their craft. This is a condition of things much deplored, especially by those who do not take apprentices; but we are not prepared to admit that the man with seven years' shop experience at the present time is inferior to his predecessor of the forties. The assistants' lot has undoubtedly been much improved since the 1868 Pharmacy Act came into force, and especially since the Wheeldon case convinced the Pharmaceutical Council that, however desirable the personal qualification of

the owner may be, the legal qualification of every seller was contemplated by the Pharmacy Act. The recognition of this has added materially to the Pharmaceutical Society's revenue by forcing assistants, with few exceptions, to qualify themselves; and assistants have also been benefited by improved salaries, 60*l.* a year indoors being now a common salary to such men as were content twenty years ago with 45*l.* or 50*l.*

BETTER SHOPS.

One influence, which the advent of store competition has had upon the drug-trade is shown in the remarkable improvement there has been upon shop-furnishings. There are some beautiful old pharmacies in this country which are eloquent of the ability of cabinet-makers to make a shop attractive by good workmanship, elegant carving, and brass labels; but once the cabinet-maker went out there was little choice in regard to bottles and jars to place on the shelves. This was during the first half of the Queen's reign—what we may call the black carboy period, when no chemist's shop was considered complete without a row or two 2-gallon spherical bottles on the top shelf, which were a nuisance to dust and useless for any reasonable purpose. Early in the seventies the demand for these carboys had become as slack as that for leeches, and therefore modifications in the style of fittings supervened. Shop-rounds began to be better finished and better labelled; the Glasgow Apothecaries' Company introduced from America the recess-labelled bottles, and these were soon followed by the Bohemian vitreous labels. There were also changes in ointment-pots, and such novelties as elegant crystal vases, glass labels for drawers, glass knobs for china and mahogany ones have helped to brighten things up a bit, while gas and electric light have made brilliant the dingy, candle-lighted pharmacy of the pre-Victorian era. Counter-display became a high possibility with the advent of the bent-front showcase, and plate glass windows have awakened chemists to the fact that the window may be made to pay the rent. These and many more changes are external influences common to all shop callings, which all have benefited by, and they help to make business better and easier. But all these things are as clothes to the man, and we have to seek in matters previously dealt with for evidence of improvement in pharmacy as an art, and in the pharmacist as an individual.

THE "GOOD OLD TIMES."

"SURELY common reason would say that one region should help another when it lacketh. And therefore God hath ordained that no country should have all commodities; but that, that one lacketh another bringeth forth; and that, that one country lacketh this year, another hath plenty thereof the same year; to the intent that one may know they have need of another's help, and thereby love and society to grow amongst all the more."—HALES: *Discourse of the Common Weal*.

In August, 1837, there was published by the London Chamber of Commerce a comparative table of taxation, currency, and prices for fifty-four years, from 1784 to 1837. The compilation of this work must have entailed an enormous amount of labour. Official statistics were in those days by no means so carefully kept as they are now, and it was therefore necessary to go to various private sources for accurate and unbiassed information. The "wages for artisans" given in the table, for instance, were compiled from the pay-sheets of Greenwich Hospital. The files of a journal known as *Prince's Price-current* supplied information with regard to the quotations of certain staple commodities, the minutes of a Parliamentary Committee on Trade were searched for the figures relating to freight-rates, and so on. Altogether the table forms a document of great economic and historical interest, revealing almost at a glance much of the commercial history of the kingdom during one of the most interesting periods of its history.

The period with which the document deals is divisible roughly in two portions—the first from the commencement of Pitt's taxation-reforms, carried out under the influence of the ideas of the author of the *Wealth of Nations* (1784), to the end of the Napoleonic wars and the second from 1818 to the beginning of the Victorian era in 1837. The former period was one of a steady rise in taxation, currency, and prices of commodities. During the

second prices fell continually; and in 1837 had reached a much lower level than within any time of modern history, while currency became unusually contracted, and the taxation remained out of proportion high. One of the results of our French wars was that the average annual amount raised by public taxation, which, in the years from 1784 to 1790 was 14,500,000*l.*, rose to 65,000,000*l.* between 1812 and 1818, while the amount of gold coined by the Mint fell from 2,000,000*l.* to 300,000*l.* per annum.

The prices of almost all staple articles began to advance about the year 1795, in many cases to three or four times their old rates. Thus, taking the average price of all the following articles between 1784 and 1790 at 100, their cost, wholesale, during the years 1812 to 1818 was as follows:—Brandy 405, candles 152, Newcastle coals 190, cochineal 229, wheat 187, barley 191, cotton yarn 150, flour 223, pig iron 151, leather 202, rape oil 174, beef 188, pork 176, butter 197, rice 275, lump sugar 172, tea 143, American pine timber 430, Virginia tobacco 352, wool 211. That is to say, the cost of living in England had doubled within a quarter of a century. Wages, with the exception of those of hand-loom weavers, whose trade was beginning to die out, had increased in proportion. In 1815 the rate of wages for carpenters, bricklayers, masons, and plumbers was from 5*s.* 6*d.* to 5*s.* 9*d.* a day. Taxation had grown still more; for every 100*l.* paid into the National Purse in 1790 the Chancellor of the Exchequer in 1815 exacted 450*l.* Naturally, most of the money required was raised by Customs duties. As it is said to be darkest just before dawn, so the morning of Free Trade was preceded by the most rigorous Protection known in this country in modern times. But on drugs and spices the duties were, generally speaking, not very heavy. The following may serve as illustrations of the average cost of such articles and the average duties upon them in the seven

years ending in 1825. The average cost is given first, the duty in parentheses:—

Canadian potashes, 39s. 9d. (1s. 7½d.) per cwt.; pearlshashes, 43s. 10d. (1s. 7½d.) per cwt.; cinnamon, 8s. 3d. (2s. 6d.) per lb.; cochineal, 24s. (2s. 5½d.) per lb.; Spanish indigo, 10s. 9d. (4½d.) per lb.; nutmegs, 4s. 5½d. (2s. 11d.) per lb.; olive oil, 51l. 6s. (15l. 12s. 11d.) per tun of 236 gallons; opium, 21s. 6d. (8s. 11½d.) per lb.; black pepper, 6½d. (2s. 4½d.) per lb.; pimento, 9½d. (9½d.) per lb.; quicksilver, 1s. 10½d. (1s. 7½d.) per lb.; caraway-seed, 36s. 8d. (23s. 4½d.) per cwt.; beeswax, 11l. 3s. 3d. (66s. 6d.) per cwt.

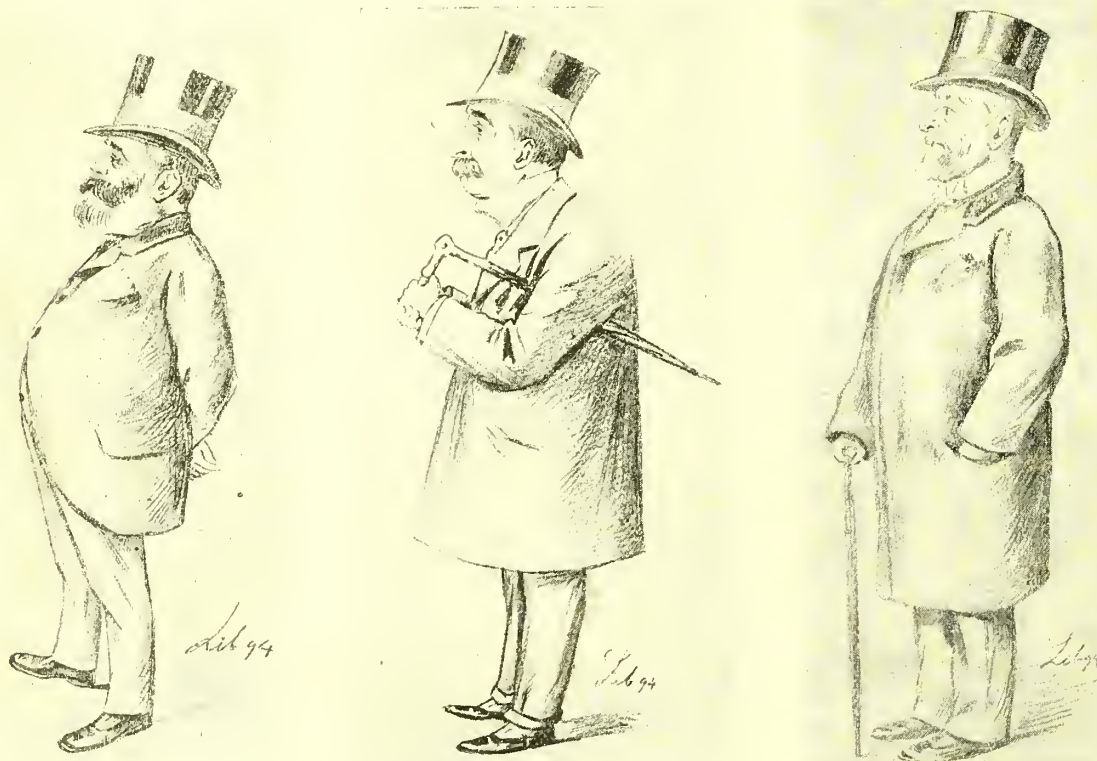
Most drugs and chemicals remained dutiable in this country until 1845, when almost all duties were swept away, the only ones left being on isinglass, 5s. per cwt.; chemical, essential, or perfumed oils, 1s. per lb.; essential oil of cloves, 3s. per lb.; refined camphor, 5s. per cwt.; verdigris, 5s. per cwt.; morphia and its salts, 5s. per lb.; and various duties on glass bottles and spirits. In 1845 there was also abolished the "auction duty" of 5 per cent. on the value of goods sold by public sale by any persons except the first importers, a duty which placed the wholesale druggist and jobber at a disadvantage compared with the importer.

MODERN MINCING LANIANS.

By way of contrast with the old figures presently to be referred to, we give portraits of three men of

scarce, but copies of odd plates may be seen framed in the offices of a few of the older City houses. There are two such pictures in Messrs. Jenkin & Phillips's office, and Messrs. Price, Hickman & Co., another firm of Mincing Lane drug-brokers, boast a whole gallery of them, as well as a somewhat incomplete copy of the book itself. Through the courtesy of these two firms we are able to reproduce here a group of Dighton's City merchants. The original portraits were drawn within the space of five years; and although, grouped, they present slight incongruities in costume (it was the age of the Twilight of the knee-breeches and the Dawn of the pantaloons), and possibly not all the persons in our picture were on sufficiently intimate terms to converse together in so friendly a style as they are here represented, we have thought that the grouping would add interest to the picture.

It is a melancholy reflection on the fleeting nature of human renown that we have not been able to find anyone in Mincing Lane who can impart more than the scippiest information concerning the personalities of five of the gentlemen whom we depict. Though perhaps not warriors (the Volunteer movement had not yet commenced), they were certainly captains of commerce. Two of them (those talking together on the right side of our sketch) are, indeed, historical characters. The gentleman in knee-breeches—who



modern Mincing Lane, drawn by *Lib*, and sold by auction with many others in December, 1894. The first one, described at the time as "a genuine Reynolds, coated with the best shellac varnish," represents Mr. Reynolds, of 3 Mincing Lane, E.C., a shellac-broker. The second portrays Mr. Tabor, of the firm of W. H. Cole & Co., American drug-merchants; and the last Mr. Ashmore, sen., also an export drug-merchant.

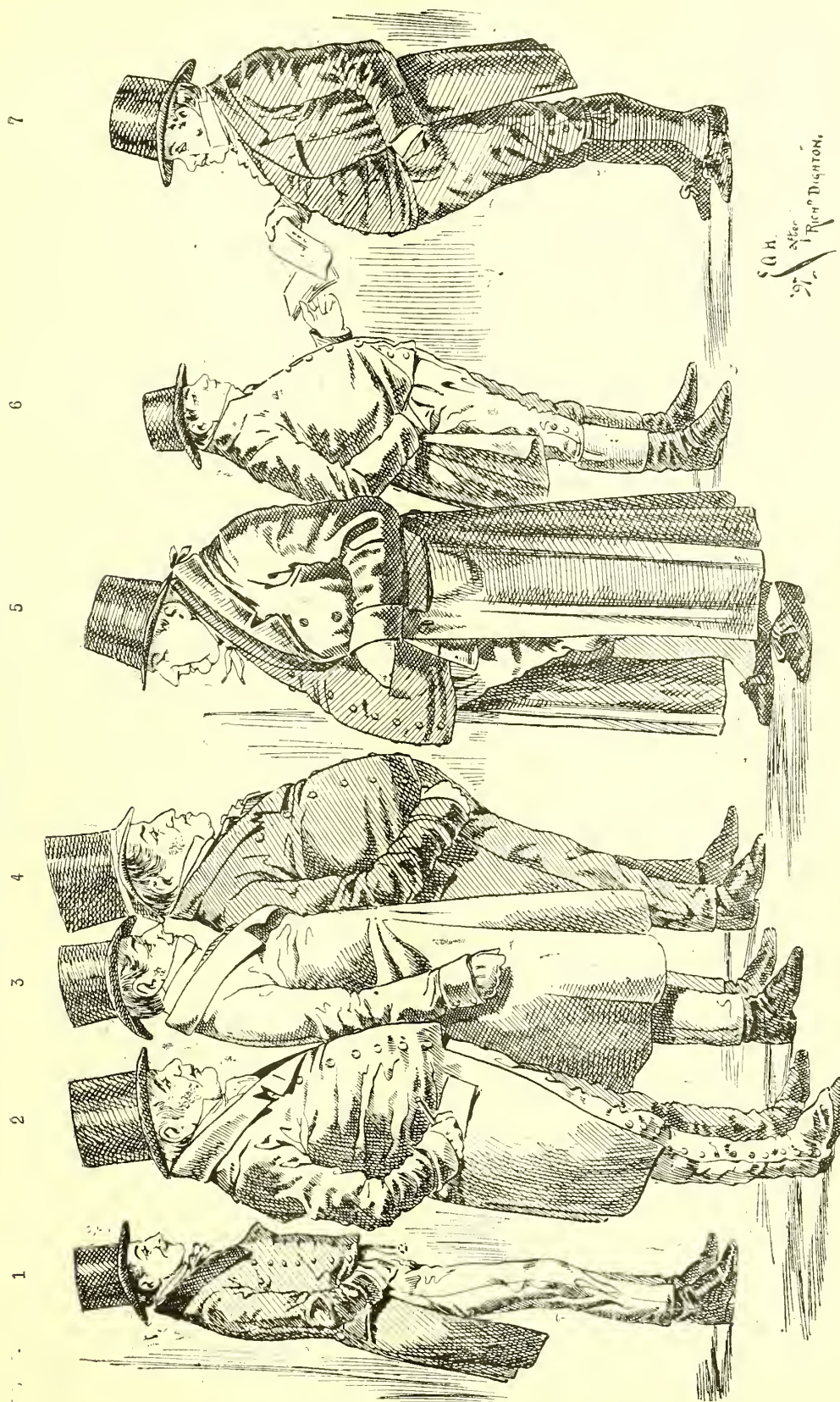
PRE-VICTORIAN MINCING LANIANS.

'Hen! nunc sub fossa sunt tanti militis ossa.'—THACKERAY.

Between the years 1817 and 1823 a clever artist, named Richard Dighton—a precursor of *Ape* and *Spy*—went about London City making sketches of its prominent men. He afterwards published in book-form a collection of about fifty etchings from these drawings, in the shape of hand-coloured plates, each representing a single figure. The book is now

is dressed entirely in black—is none other than one of the Rothschilds, and his companion, in yellow-topped bluchers, grey trousers, and a snuff-coloured coat, is Mr. Overend, of Overend & Gurney, the bankers, whose failure created one of the worst financial crises known in London. The evil that men do lives after them. Mr. Overend is not forgotten. Had he died a prosperous man and left a million, no one would remember him now. The other five are more closely connected with the drug-trade. The keen and pale faced gentleman in blue coat with yellow brass buttons and nankeen trousers, on the left, is described by the artist as "Charley, the Principal Broker." Investigation has brought out the fact that he is Mr. Charles Albrecht, a rice broker in a large way of business, which descended to his son, who was, it seems, unfortunate in speculations. Next to him stands an individual in black coat, white cravat, and gaiters, below whose portrait Mr. Dighton has put the legend, "Is camemile a drug?" The querist is

A GROUP OF CITY MEN IN THE EARLY TWENTIES.



1. MR. CHAS. ALBRECHT, Rice-broker. 2. MR. BOWDEN, Drug-broker. 3. MR. MENDS, of DAVY, Roberts, Son & Mends, Wholesale Druggists. 4. MR. HEADS, Wholesale Grocer.
 5. MR. THOS. HALL, Druggist. 6. MR. OVEREND, of Overend & Gurney, Bankers. 7. MR. ROTHSCHILD, of Rothschild & Sons, Bankers.

Mr. Bowden, a drug-broker, whose firm is extinct. "The Market Mends" is the punning *sobriquet* of a pensive-looking gentleman in brown coat, yellow gloves, and white trousers, who forms the left-most of the central group of three. His name was Mends, and he was a partner in the firm of Davy, Roberts, Son & Mends, who still survive as Davy, Hill & Co. The fat man in black in the centre, described as "King Richard, the Brokers' Friend," is Mr. Heald, a wholesale grocer of equal physical and commercial prominence. He is talking to Mr. Thomas Hall, a drysalter (in a long brown overcoat), whose son is still in business in the indigo-trade.

That is all we know of the pre-Victorian Mincing Lanians. "They came like water, and like wind they went." With regard to their successors, the development of photography will preserve a larger variety of their likenesses, and the rise of trade journalism may possibly help some Jubilee writer at the end of the twentieth century to trace their careers in greater detail.

"THE COMPANY'S CANDLE."

No. 899 M
A Warrant is given this 2^d August 1823
to Mr. Heald
numbered as in the Margin, for your delivering
to him, or his Assigns, the following Goods, viz.
No Sale, 1823 per the Ship *Gelwondia*
Folio 301 Lot 7454 1 Chest Indigo 195 lbs. 4
40.2.1.3
40
Sold him by the United East India Company, with which
you are to comply. Treasury, East-India House.
Joh

East India Company's Warrant for a Chest of Indigo,
dated 2nd August, 1823.

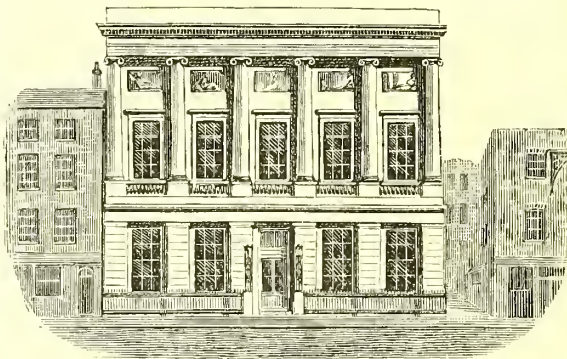
The bulk of the East Indian goods sold in London in the thirties were imported by the East India Company, who, before offering the merchandise for sale, issued a "General Preamble," setting forth, in twenty-one paragraphs, the conditions under which the goods were offered. All brokers had to declare, within ten days, the names and addresses of their principals. If they bought for principals out of London, a London merchant must stand security. In all cases a deposit, to be fixed by the Court of the Directors of the Company, must be made on goods purchased. Coffee, pepper, saltpetre, turmeric, ginger, cloves, &c., were not lotted before the sale, because they were "usually of the same, or nearly the same, goodness," and therefore the buyer was compelled to take what packages were given to him, "as taken from the piles, as they rise." The goods were sold at the tares recorded in the Company's sale-books, but on all weighable goods a "draft" allowance of 1 lb. was made on every package exceeding 28 lbs. in weight. Payments might be made either in cash or in such of the Company's bonds on which six months' interest was due. Any disputes arising were settled by the Court of Directors of the Company, or by a majority vote of such of the Company's directors as happened to be present at the auction. The penalties for transgressing any of these rules were short—viz., "that the offender shall not be admitted to buy again at the Company's Candle, as a Broker: also, to the end that all Persons may take Notice that the Company will not make any Contract by such Brokers, their Names shall be placed up in the Sale Rooms."

"The Company's Candle" refers to the candle which was put up on the selling brokers' rostrum and lighted, the bidder who offered most money before the candle burned down being the purchaser of the lot.

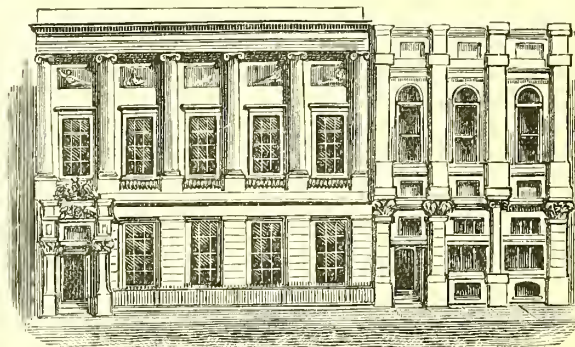
THE LONDON COMMERCIAL SALE-ROOMS.

Our two illustrations represent the old London Commercial Sale-rooms, the centre of the Mincing Lane produce-trade.

The first is a reproduction of a print in the Rooms, and shows the original building, which afterwards, when reconstructed and enlarged, assumed the appearance shown in our second illustration. This "restored" building was in its turn demolished within the past five years, and in its place there has arisen a gorgeous structure, just completed.



The foundation-stone of the Commercial Sale-rooms building was laid on June 1, 1811, with a good deal of ceremony. The bells of the neighbouring churches rang, the Hon. East India Company's band played, and the windows overlooking the site were thronged from early morning. In the afternoon the Lord Mayor, in full civic pomp, laid the foundation-stone truly and well, a varied assortment of samples of imported goods and a set of coins of George III. being placed under the stone. The



"The place itself is lovely. . . . Its aspect pleases most when one regards it with one's back." (Heinrich Heine on the University of Göttingen.)

Lord Mayor made a patriotic speech, very abusive of the French. He regretted that, owing to the ascendancy of tyrannic power in a neighbouring nation, commerce had been depressed, but assured his hearers of his firm conviction that "the world could not go on in its then state"—a pretty safe prediction, which was fulfilled in due course. My Lord Mayor also alluded to the fact that the Tyrant of Europe was casting envious eyes on this happy isle, and quoted Campbell. Then he was presented with a bottle of rum, and with one of Portuguese wine, as emblems respectively of our colonial produce and our "brave and faithful ally." Both bottles were broken on the stone.

For a long time the Commercial Sale-rooms did not pay. Shares fell to 10s. or 15s. apiece, and people did not think they would ever be worth much; but to-day the 10% shares are quoted at 18½ 10s. to 18½ 15s. The pulling down of the old building began in 1891. It had become utterly unsuited to the requirements of the time. The membership had much outgrown the accommodation, the rooms were badly ventilated and worse drained, and their general aspect was one of extreme shabbiness and slovenliness. The rebuilding was a costly and difficult work, for it had to be conducted piecemeal, so as not to disturb the public sales of produce (which are mostly held in the rooms over the members' quarters on the ground floor), or close the place to its members. The new building is said to have cost 100,000£.

THE DRUGGISTS' CLUB AND TERMS OF SALE.

In 1838 there was a druggists' club, of which the following London firms, representing practically the entire wholesale trade of the Metropolis, were members:—

Thomas Ashmore	Horner and Son
Barron, Harvey, and Co.	Howard and Coleman
Brown, Roper, and Co.	Jacob Hulle and Co.
John Cole	Thomas Keating
Davy, Mackmurdo, and Co.	Kempson, Yates and Co.
Drew, Heyward and Co.	Thomas Marsden and Sons
Ellis, Langton, and Co.	James Metcalfe and Co.
Evans and Lescher	William Moberly
Samuel Foulger and Son	David Taylor and Sons
Fynmore and Pigeon	Treacher, Osborn & Co.
Hearon, Bright, and Co.	Robert Westwood
Herring Brothers	White, Catherley, and Hill
Thomas Hodgkinson & Co.	

A copy has recently been found of the regulations regarding the conditions on which drugs were sold in London in 1838. It was printed on behalf of the club. We subjoin a few extracts from this interesting document:—

REGULATIONS

For the Weighing and Taring of Drugs sold in London; with a List of Drafts, Trets, Customary Allowances, and Terms of Payment.

All Articles, including those which are the produce of and imported direct from the East Indies and China, are to be tared and then weighed gross.

All Articles, the produce of and imported direct from the East Indies and China, are to have drafts allowed as follows:—

	lbs.	lbs.
If the packages weigh above.....	28 gross,	1 draft is to be allowed.

	lbs.	lb.
If the Tare of a Package exceeds.....	28, a supertare of 1 is to be allowed in addition to the draft.	

All other Goods are to have drafts allowed as follows:—

	cwt.	lbs.
If the gross weight be under	$\frac{1}{2}$...	no draft.
Ditto	ditto ... $\frac{1}{2}$ cwt....	and under... 1 ... 1 draft.
Ditto	ditto ... 1 cwt....	ditto ... 3 ... 2
Ditto	ditto ... 3 cwt....	and upwards..... 4

The following articles are exceptions to the foregoing Rules, and are to have the allowance of Tares and Drafts as follows:—

	lbs.	lbs.
Annatto, Lisbon	6 tare per 100 when in Baskets, and 2 per 100 for Leaves.	
Aloes, Cape	20 do. per 100	
Aloes, Bbds.	6 do. per 100 and 1 lb. Dft. per 100, five Gourds to be weighed together.	
Ditto Epatic, in Kegs, tare $\frac{1}{4}$ th of the gross weight, if as full as usually imported and without an ullage.		
If an ullage the tare to be agreed.		
Almonds, Bitter.....	13 lbs. do. per Seron or average tare.	
Bals. Capivi, in Barrels, weighing gross under.....	$1\frac{1}{2}$ tare	42
Ditto	$1\frac{1}{2}$ and under...	2 ... 56
Ditto	2 ditto	3 ... 63
Ditto	3 ditto	4 ... 84
Ditto	4 ditto	6 ... 112
Bals. Capivi	If in Jars, $\frac{1}{3}$ rd of the gross weight for the tare, and 3 lbs. for skins, or an average tare.	
" Peru		
" Tolu		
Burgundy Pitch	14 tare per cwt.	
Castor Oil, in Barrels...	20 do. per 100 lbs., or an average tare.	
Duppers and Tins, containing Castor Oil, are each to be weighed separately and average tare allowed.		
Galls	8 tare per Bag, and 2 for Ropes (if any). Draft the same as other Drugs.	
Liquorice Root, in bulk	12 draft per ton.	
Oil Bays	tare $\frac{1}{3}$ rd of the gross weight or average tare.	
Quicksilver	18 tare per Iron Bottle or average tare.	

Quassia in bulk	12 draft per ton.	
Senna, Alex. and Tripoli, in Bales of 4 and upwards, 10 tare per 100.		
Ditto	ditto	ditto smaller sizes real or agreed tare.
Sarsaparilla, Lisbon, 10 tare per 100, or an average tare to be taken and allowed.		
Sarsaparilla, imported in bulk and made up in bundles here, 1 draft per 100.		
Sassafras in bulk, 12 draft per ton.		
Squills in bulk ...	12 draft per ton.	
Terebinth Chio, if in Jars, $\frac{1}{3}$ rd of the gross weight for tare.		
Verdigris, under 30 gross, 2 per sack, and 1 draft per cwt.		
Ditto 30 lbs. gross, and upwards, 4 lbs. per sack, and 1 lb. draft per cwt.		
Wax	12 draft per ton.	
Carbonate of Ammonia, in casks usual draft.		
Magnesia	} are subject to the allowance of draft.	
Epsom Salts		
Glauber Salts		
Sal Ammoniac		
Arsenic		

Then follow various other conditions of less interest.

LONDON WHOLESALE HOUSES IN 1817.

Mr. Arthur S. Hill, who is the oldest living member of the wholesale drug-trade (though now retired from active business), and was personally acquainted with most of the London wholesale druggists of William IV.'s reign, has drawn up the following interesting statement of the wholesale drug-firms carrying on business in the metropolis between the close of the Napoleonic wars and the accession of the Queen. We place the names in alphabetical order, and add a few comments concerning their later history:—

1. Beckwith, Barrons & Harvey, of Giltspur Street.
2. Brydon, of Cornhill. (Extinct.)
3. Barketts, Winstanley & Ticknell, of Poultry. (Business bought by Corbyn & Co.)
4. Corbyn, Beaumont & Co., 300 High Holborn. (Took Stacey and Menier into partnership. Menier went to Apothecaries' Company.)
5. Davy, Roberts, Son & Mends, of Gould Square, Minories. (Roberts started for himself. His successors are Dalton & Young and Herbert Dalton. Mends was the "Market Mends" of p. 969. The firm subsequently became Davy, Yates & Co., and has now amalgamated with Hill & Son.)
6. Ellis, Metcalf & Langton (afterwards Langton, Edden & Co.).
7. Fawkes, Horner & Fawkes. (Now Horner & Sons. The Mr. Horner of that day was the grandfather of the present proprietors.)
8. Fynmore, Palmer & Pigeon, of Throgmorton Street. (Now Burgoyne, Burdidge & Co. Mr. Pigeon was Mr. R. B. Barron's grandfather. Firm held Ordnance contracts.)
9. Gascoyne & Hill, of Little Britain. (An offshoot of No. 20, where they were apprenticed. Gascoyne died within a year, and the firm was amalgamated with White & Cantherley. Mr. Hill, father of Mr. A. B. Hill, of Southwark Street, is still alive.)
10. Hodgkinson, Brandram & Co., of Fleet Street. (Now Hodgkinsons, Treacher & Clarke. Mr. Brandram, who then lived at 4 Stamford Street, afterwards originated the firm of Brandram & Co., sulphur and saltpetre refiners.)
11. Howard & Coleman, of Cannon Street. (Extinct.)
12. Jackson & Manley, of Paternoster Row. (Extinct.)
13. Kempson & Co., of Snow Hill. (A very large firm, extinct.)
14. Kirk, Hearon, McCulloch & Bright, of Bishopsgate Street, E.C. (Now Hearon, Squire & Francis.)
15. Mason, Cameron, Bird & Quincey, of St. Paul's Churchyard. (Mr. Quincey was the father of Mr. R. de Quincey Quincey, now of Fenchurch Street.)
16. Samuel Smith, of Fenchurch Street. (Extinct.)
17. Sparks & Elvans, of St. Peter's Hill. (Extinct.)
18. Taddye & Franklyn. (Extinct.)
19. Westwood & Bury, of Newgate Street. (Afterwards Wymans & Westwood, now amalgamated with G. Curling & Co.)
20. White & Cantherley, of Ludgate Hill. (Afterwards A. S. Hill & Son, of Southwark Street.)
21. Wilson, Minshull & Co. (Now Hodgkinson, Prestons & King.)

It speaks well for the vitality of the wholesale drug-trade that after eighty years (all these firms existed in 1817) thirteen of the twenty-one houses should still survive in some form or another. Hewlett & Goddard, the originals of C. J. Hewlett & Son, Charlotte Street, commenced business in 1832.

"BUSINESS DULL."

The British druggist is a worthy compeer of the British farmer in this respect—that he has never been known to confess that trade was satisfactory. Whenever you meet him he will tell you that he has never known business to be duller, or more unprofitable, than now. Since the Queen's accession many fortunes have been made in the drug-business, successive generations have found a comfortable living in it; the general standard of material well-being has grown unceasingly. But the druggist always has, or affects to have, a regretful bantering for the past. In 1937 his descendants (incomparably more prosperous still than the generation of to-day) will certainly sigh for the golden times—Queen Victoria's Jubilee year—"when there was still some money to be made in business, and things were not so confoundedly dull." The only instance in modern life that we know to compare with this *blasiness* is that when his Grace the Duke of Devonshire is said to have stopped in the middle of his own speech to yawn at the general dullness of things. Let us look back to Thursday, June 13, 1837, a week before William IV. died. On that day a drug-sale was held at Garraway's Coffee-house, and reported in a small commercial journal that has long since joined the majority. The sale was continued on Saturday, June 15. This is the report:—

The drug-sales have not escaped the general dullness which has lately pressed so heavily upon all our City and commercial transactions. At this sale the following goods were sold:—

					Duty
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
211 chests shellac ...	4 5 0	to 5 0 0	0 0 0	0 0 0	
939 bags saltpetre ...	1 0 0	to 1 0 6	0 0 6	0 0 6	
142 boxes Pearl {	0 8 6	to 0 12 6	0 1 0	0 1 0	
58 bags sago {					
60 serous cochineal ...	0 5 8	to 0 7 5			
67 bags do. garblings	0 1 6	to 0 2 1	0 0 2 d.p.	0 0 2 d.p.	
67 bags Honduras cochineal ...	0 5 6	to 0 7 0	0 0 6 d.p.	0 0 6 d.p.	
400 chests E.I. rhubarb	0 3 3	to 0 3 6	0 1 0	0 1 0	
51 gourds aloes Bbds.	10 15 0	to 28 10 0	0 0 0 d.p.	0 0 0 d.p.	
11 bales ipecac. ...	0 3 0	to 0 3 0	0 1 0	0 1 0	
damaged ...	0 2 3	to 0 3 0			
13 jars Bals. Peruv. ...	0 4 11	—	0 0 0 d.p.	0 0 0 d.p.	
34 packages Z.Z. Jam.	3 10 0	to 4 17 6	0 0 0 d.p.	0 0 0 d.p.	
53 barrels tapioca ...	0 0 2	to 0 0 5	0 0 0 d.p.	0 0 0 d.p.	
200 chests E.I. rhubarb	0 3 3	to 0 3 7	0 1 0	0 1 0	
10 chests sang. dracon	3 19 0	to 4 14 0	0 4 0	0 4 0	
8 tons sassafras ...	8 15 0	—	2 0 0	2 0 0	
68 bales jalap... ..	0 1 4	to 0 1 6½	0 0 6	0 0 6	
25 kegs tamarinds ...	5 1 0	to 5 4 0	0 9 4	0 9 4	
10 casks cr. tartar ...	2 17 0	to 2 19 0	0 2 0	0 2 0	
30 chests manna ...	0 3 0	to 0 3 6	0 0 3	0 0 3	
10 cases sang. dracon	5 0 0	to 8 0 0	0 4 0	0 4 0	
8 boxes cantharides ...	0 4 1	to 0 4 2	2 0 0	2 0 0	
Ol. olive, half jars ...	3 0 0	to 3 2 0			
half chests... ..	1 0 0	to 2 0 0	4 4 0	4 4 0	
per gal. ...	0 3 2	to 0 5 4			
6 casks gm. sandrac ...	3 2 0	to 3 2 6	0 6 0	0 6 0	
20 bgs. Bengal turmeric	0 10 0	—	0 2 4	0 2 4	

"BOUGHT IN MINCING LANE, 1837."

Here is a list of drugs purchased by the Messrs. Hills' firm in June, 1837. The lots marked with an asterisk were purchased by public auction at Garraway's Coffee-house.

Quantity	Article	Price	Duty	Bought from
1 canister	Balsam toluani per lb.	6/	Paid	Horner
1 bottle	Argent. vivum "	3 9½	"	"
½ cwt. ...	Spir. vini rect per gall.	17 6	"	Gordon
56 lbs. ...	Rad. glyc. recent. per cwt.	80/	"	Butler
1 cask ...	Vitriol cerul ... "	40/	8d.	Brandram

Quantity	Article	Price	Duty	Bought from
1 cask ...	Flor. sulphur...	15/	5d.	Brandram
1 bag ...	Cubebs ... "	6 6 0	—	Fynnmore
*1 chest...	E.I. rhub., flat per lb.	3 6	Bond	Barber
*1 chest...	" " "	3 6	—	Northcote
½ pipe ...	Olive oil per gall.	5 3	Paid	Price
10 barrels	Saltpetre, ref. per cwt.	28/	—	Ferguson
1 chest...	So azzi juice "	7 7 0	—	"
*2 lots, 5 caustr's each ...	Castor oil, C. C. per lb.	7	13 ea. (in bond)	Griffin
*1 keg ...	Hepatic aloes (Socotrin) per cwt.	7 17 6	2d.	"
*2 casks...	Gum arabic "	95/	Paid	G. Brooks
*2 sacks...	Blue galls "	75/	—	"
2 chests	Gum acaciæ, E.I. "	70/	In bond	Griffin
4 c. ...	Adeps. ppt., fine "	72/	—	Stapp
1 hhd. ...	Sp. wine per gall.	17 6	—	Gordon
2 casks...	Flor. sulphur per cwt.	15/	—	Brandram
1 ...	Ol. cumini per lb.	20/	—	Fynnmore
½ cwt. ...	Cap. papav., broken per 1,000	40/	—	—
2½ cwt...	Lump sugar per cwt.	80/	—	Fry
28 lbs. ...	Rad. zin. Jam. parv. "	117 6	—	Ferguson
112 lbs.	Fol. ros. rub. nov. per lb.	3/	—	Burchett
14 lbs. ...	Ext. hyoscyami "	10/	Paid	Coleby
—	Fol. " siccat "	—	—	"
42 lbs. ...	Acid. oxalic "	1 7	—	Heyne
3 cwt. ...	Ammon. murias per cwt.	51/	—	"
5 kegs ...	Jamaica honey in bond per lb.	7½	—	Price & Geff
1 jar ...	Ess. bergamot "	11/	Paid	T. Merry
15 loaves	Sugar at 3 cwt. per cwt.	80/	—	Fry

DRUG PRICES IN THE EARLY CENTURY.

The following table, compiled from price-lists in the possession of Messrs. Barron, Harveys & Co., shows the wholesale market-rates of some of the principal drugs at three periods in the first half of the century:—

	Dec. 12, 1808	Nov. 13, 1838	April, 1844
Acid, benzoic ... per lb.	—	1 4	1 9
" oxalic ... "	—	1 8	1 9
" tartar. pulv. ... "	—	1 7½	1 9
Ammon. ppt. ... per cwt.	—	70/	65/
Ærugo aeris exot. ... per lb.	7 6	1 10	1 6
Aloes, Barbadoes ... "	5 4½	7 to 8/	1 6 to 2 6
" hepatic ... "	3/	1 6 to 2 6	1 10 to 2 2
" Cape ... per cwt.	8½	3½ 15s.	3½
" Socotrine ... per lb.	4/	2½ to 2 8	2 to 3½
Bals. copaiba ... "	4/	5 6	1 6
" Canada ... per bottle	—	2 9	3 3
" Peru ... per lb.	10 6	7/	—
" tolu. ... "	5 9	5½ to 6/	3/
Camphor ... "	8/	3/	3 10
Cantharides (Russ.)...	22/	5 9	3 3
Cort. cinchon. pal. ...	4 to 10/	1 6 to 3 6	1 6 to 3 6
" " pulv. ...	4 to 8/	2 to 3 6	2 6 to 3 6
" " flav. ... "	5 3	4/	4 6
" " rubr. ... "	—	none	none
Cremor. tartar. ... per cwt.	9½ 9s.	3½ 15s.	3½ 14s.
Cubebs ... "	—	8½	3½ 5s.
Ess. bergam., Ital. ... per lb.	10 6	14/	13/
" limon. ... "	10 6	9 6	7/
Fol. sennæ, Alex. ... "	4 to 5 6	2 3	1 3
" " Tiny Vy ... "	—	3 9	2 3
" " Ind. ... "	2 6	10 to 1/	8 to 10
Flor. chamomel. ... per cwt.	7½ to 8½ 8s.	11½ to 14½	6½ 10s. to 9½ 10s.
Gum arab., Tkey elect ...	16½ 16s.	11½ 11s.	8½ to 12½ 12s.
" " " sorts ...	7½	8½ 8s. to 16½	5½ to 6½ 10s.
" " E.I. ... "	5½	3½ 15s.	3½ 10s.
" benzoin ... per lb.	3 6 to 6 6	2 to 3 6	2 to 3 6
" " foetid. ... "	1 to 3/	1 to 1 6	1 to 1 6
" myrrha, Turk. ... "	5 6	2 6	1 9 to 2 1½
" " pulv. ... "	3 6	1 6	1 6
" scammm., Alep. ... "	44/	21/	23/
Manna flake opt. ... "	5/	6/	2 to 5/

	Dec. 12, 1808	Nov. 13, 1838	April, 1844
Magnes. opt. ... per cwt.	—	83/	90/
" ust. ... "	—	2 6	2 6
Moschus Chin. pod ... per oz.	28/	30 to 40/	45/
" grain ... "	38/	40/	60/
Ol. amygd. ess. ... per lb.	—	50/	30/
" dule. ... "	2 8	1 3	1 6
" cajaputi ... per bottle	—	12/	9/
" caryoph. ... per lb.	75/	13/	12/
" cassia ... "	8/	10/	—
" cubebæ ... "	—	20/	12/
" lavand. Ang. ... "	76/	40/	56/
" Gallie. ... "	12/	7 to 9/	6 to 8/
Ol. menth. pip. Ang. per lb.	50/	38/	32/
" exot. ... "	—	26/	13/
" rorisnar ... "	—	3 6	—
Opium, Turkey ... "	32/	17 6	12 to 13/
" Egypt ... "	—	13 6	—
" Ind. ... "	30/	—	—
Otto of roses ... per oz. T.	—	17/	19/
Rad. caryoph. Ind. ... per lb.	2 4	1 4	—
Piper kian (Cayenne) ... "	6/	3/	3/
Rad. gentian ... per cwt.	110/	30/	30/
" jalapii ... per lb.	3 8	3 4	2 6
" ipecac. ... "	13/	3 6	3 4
" rhæi., Ind. ... "	4/ to 6 6	4 to 5 6	3 to 4 6
" Turkey } "	28/	10 6	13 6
" Russ. } "	—	—	—
" sarsæ, Lisbon } "	—	3/	3 6 to 3 9
" Jamaic. } "	—	—	—
" Hond. ... "	—	2 6	—
" inc. ... "	3 9	3 3	2 8
Sang. dracon., lump ... "	3/	2/	—
" read ... "	6/	2 6 to 4/	2/ to 3 6
Sperma ceti ... "	3 4	1 9	2/
Sulp. quinine, French per oz.	—	13 6	11/

We give the list in its curious mixture of English and Latin.

EARLY ORDERS BY PENNY POST.

The postage-stamp as Rowland Hill invented it was neither gummed nor perforated. There were only two stamps

most popular forms of sending communications by post was by "cover," a sheet of paper about 8 by 6 inches, which was folded in the old-fashioned manner and closed with a wafer or seal. The centre of the sheet bore Mulready's famous design of Britannia sending out winged news messengers to all parts of the earth. The black one-penny Mulready envelopes are now worth several pounds. One such, which we reproduce in facsimile, hangs in Messrs. Howards' office. It bears the post-mark of April 17, 1841, and is a laconic communication from W. Andall & Co., of Wolverhampton, asking the addressee to forward, "per Shapland," 112 lbs. of calomel in 14-lb. parcels. How much the commercial development of the colonies was impeded by what now seem the monstrous charges for franking letters is an interesting speculative question. In 1841 a $\frac{1}{2}$ -oz. inland letter was already carried for a penny, a 1-oz. one for twopence. But colonial letters if sent by mail-vessel were charged twelve times, if by private ship eight times, those rates. Foreign letters if sent by private ship were charged the same rate as colonial ones, but by mail-steamer the rates differed for almost every country and route.

FAITHFUL CUSTOMERS.

In the early Victorian days one of the partners in the firm was usually on the road—on horseback—to call on customers. Price-lists were rarely sent; the firm of Herrings inaugurated that practice, which was much resented by the other druggists; at first prices were filled in in writing, but Hewlett & Goddard started an entirely-printed list. The steadfastness of the British customer to the people with whom he has once opened relations, and in whose integrity he has confidence, is shown by the fact that all the old London wholesalers have on their books firms whom they have supplied since last century. Before the Queen's accession the Messrs. Hills' old firm travelled regularly in the North of England, and had a good connection among surgeons there. Several of the descendants in business of these surgeons still send their orders regularly to the Southwark Street house, although no representative of the Messrs. Hill has been near them for sixty years or more. What is more, many of these ancient customers religiously adhere to the titles of preparations that have long since changed their names. Among the records of the firm of Hill is a weather-

beaten, syrup-stained booklet, compiled in 1788 by one William Stock, who flourished, as the title-page says, "in *vic*o dicto Ludgate Hill," and who had succeeded to the business "in *vic*o Dalmahoyi suffecto, Sacre Regine Majestati Nuper Chymista." This book is often consulted now, because it gives the obsolete Latin names of scores of eighteenth-century preparations and their composition. When a modern assistant has to book an order for "*Saccharum saturnii*," or "*Aethiops mineral*," or "*Cinnab. fact.*," or "*Flor. martial*," and does not know what is meant, he looks it up in this book. The Dalmahoy whom Stock succeeded was the inventor of Dalmahoy's Eau de Menthe, which is still a valuable proprietary article with a big sale abroad, especially in Russia.

Among the articles formerly exclusively dealt in by wholesale druggists, but now turned into other channels of trade, were sponge and arrowroot. Sponges, in 1837, were regularly sold at the drug-auctions, and arrowroot was an article much beloved of the druggists, who cleared 4s. or 5s. per lb. for the West Indian. Then the Natal arrowroot came in. It could be sold with a profit at 1s. per lb., and that is just why the druggists would not look at it. They thought that the cheap novelty would spoil their market, and tried to boycott it. The grocers took

it up, and the druggists' arrowroot-trade has gone "away in de Ewigkeit."

Here is another instance of trade conservatism. In the



or "labels," the penny and the twopenny ones. Covers and envelopes, charged a farthing each above their face value were much more extensively used than now. One of the

Messrs. Hills' bought-book of 1837 there are several entries relating to the purchase of Solazzi juice. The famous liquorice brand was then in the hands of the same importers who control it now, and the price was practically the same—about 150s. per cwt. It has never changed.

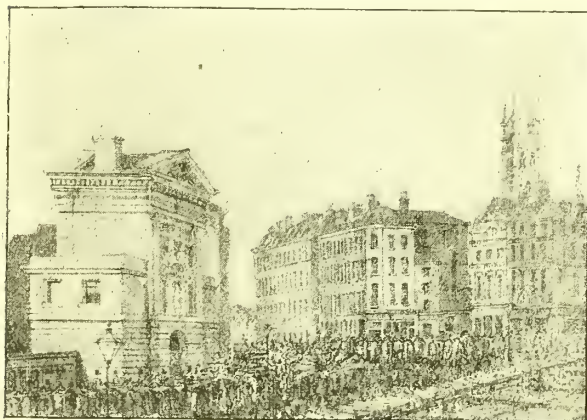
SOME GILTSPUR STREET REMINISCENCES.

Everyone in the drug-trade knows that the firm of Barron, Harveys & Co., of Giltspur Street, is one of the oldest in that branch of trade; but a genealogy of the firm may be of interest. The house commenced business in 1794 as Baldfwin, Hernon & Langton. In the next year it became Hernon-Langton, Harvey & Beckwith; in 1804 it lengthened out, still further to Hernon, Langton, Harvey, Beckwith & Barron, and subsequently we find it change its style successively to Beckwith, Barrons & Harvey, Barron, Barron & Harvey, and, in 1833, to Barron, Barron, Harvey & Co.

With the commencement of the Victorian era the style was again changed, this time to Barron, Harvey & Barron, the third partner being the late Mr. Fred Barron, who afterwards established a separate business in Bush Lane, and died some years ago. Shortly afterwards we come across the firm as Barron & Harvey, and—such is the conservatism of the house—the plate on the office-door at Giltspur Street still bears that name, although the style of the firm has changed four times since. The transmutations of the house within the present generation have been as follows:—

- 1851. Barron, Harvey & Co.
- Barron, Harveys, Becket & Simpson.
- 1880. Barron, Harveys & Simpson.
- 1880. Barron, Harveys & Co.

Since the establishment of the firm eighteen gentlemen have sat in the partners' private office, including six Harveys and four Barrons.



A Corner of Smithfield Market, showing in the left-hand corner St. Bartholomew's Hospital and the house of Barron, Harveys & Co. in Giltspur Street. (From an old Print.)

Mr. Beckwith, the junior partner, who was admitted in 1795, did the firm's travelling in the North of England. Among the records of the house is still preserved a copy of a beautifully copperplated circular dated May 12, 1795, in which Hernon, Langton, Harvey & Beckwith inform a customer that Mr. Beckwith "will have the pleasure of waiting on you at York in the course of a few days." Curiously enough the word "favour" is printed in this circular without the *u*, a mode of spelling that the Messrs. Barron, Harveys & Co. of the present day would no doubt abhor as a vile modern Americanism. A note written at the bottom of the circular states casually that "Mr. Baldwin retired from trade ye 1st January last"—that is, five months earlier. They probably thought such news quite fresh in those days.

Price-currents were not issued in the early century—at any rate to none but a few favoured customers. No retailer ever asked the price of anything. He paid what he was charged. Nevertheless, the firm would sometimes add a crumb or two of information. At Giltspur Street they

preserve some old invoices sent by the firm to country customers, and presumably returned to London by descendants of the latter as curios. Between 1796 and 1801 Mr. J. Bythell, a druggist at Shrewsbury, whose firm still remain customers of Barron, Harveys & Co., was a constant buyer, and occasionally the head of the Giltspur Street firm would add to the invoices for Mr. Bythell such notes of information as "Sal nitre, 68s."; "Salt petre, 76s."; or "American ashes, 66s." In 1808 Mr. Thos. Boothy, druggist, of Rochdale, received goods "per Pickford and Canal," and on that occasion was informed that the price of cantharides was 16s. per lb.

IODINE.

Among the many Quaker correspondents of Howard, Gibson & Co. was a certain "respected Friend" Patrick Miller, in the North. Mr. Miller sold iodine (then, of course, exclusively made from kelp) to the Stratford firm. In 1832 Messrs. Howards contracted with Mr. Miller for a supply of 2,500 oz. of iodine every three months all through the year, on condition that Miller agreed not to sell to any house at a lower price than that charged to the Messrs. Howards, or to send any "hydriodate of potash" to London for sale while the contract ran. The price of "good, clean, dry iodine" at that time was 10½d. per oz. Contrary to what is generally believed, the commercial manufacture of citric acid from citrate of lime is not a new thing. In 1842 there is an entry in Messrs. Howards' books to the effect that "citric acid is only made from citrate of lime; it takes 2½ cwt. of the latter to make 1 cwt. of the acid, of which the average price is 4s. per lb."

QUININE AND CAMPHOR.

On another page of Messrs. Howards' letter-book is an entry recording the duties on some of the articles manufactured by the firm on March 16, 1842, together with the revised duties which the Government propose to put on these articles. From the former we observe the firm's previous application to raise the quinine-duty from 1½d. to 6d. per oz. had been successful, and after obtaining what they asked for they naturally resent the Government proposal to halve the duty again because there was no necessity for so high a tax. These are some of the entries:—

Existing Duty.		Proposed Duty.	
Refined camphor	4s. per cwt. = 12 p.c.	2s. per cwt. = ½ p.c.	
Quinine sulph.	6d. per oz. = 5 "	3d. per oz. = 2½ "	
Citric acid	... 6d. per lb. = 12 "	5s. per cwt. = ¼ "	
Tartaric acid	... 4d. per lb. = 25 "	1d. per lb. = 6 "	

The average prices of these four articles for the three years 1839-40-41 were—Camphor, 2s. 8d. per lb.; quinine, 10s. per oz.; tartaric acid, 1s. 4d. per lb.; citric acid, 4s. per lb. In the manufacture of quinine, the cheap alcohol with which the French makers (then the principal competitors of Messrs. Howards) worked made a difference in their favour of 4d. to 6d. per oz. Below are the wholesale prices given in Messrs. Howards' list this Jubilee month:—Camphor, 1s. 6d. per lb.; quinine, 1s. per oz.; citric acid, 1s. 2d. per lb. Tartaric acid they no longer make. In their comments upon the proposed reduction of duties, the firm recorded their dissent from the suggestion to lower the first three named, because the foreigners use cheap glass and spirit of wine in their manufacture, while in England there is a heavy duty on both these necessary adjuncts. Camphor, we may say in explanation, is resublimed in flint-glass bells, which are broken and rendered worthless after each operation. The cost of the 14 lbs. of glass destroyed in the resublimation of a hundredweight of camphor was at that time 2s. 8d., and on crude camphor there was a duty of 1s. per cwt.

Curiously enough, under the old Navigation Law still existing in 1842, the importation of crude camphor from Holland was forbidden, while the refined article was admitted free. This is an instance of the two-edged action of duties and bounties. Holland once held a monopoly of the Japanese trade, and it was therefore natural that camphor-refining should become a big industry there. But England, in order to encourage direct trade with Japan, prohibited raw Japanese goods from being imported otherwise than direct, much to the inconvenience of the Stratford house.

Here is a list of the firms (now mostly extinct) who bought citric acid from Howards' in 1839:—Evans & Lescher, H. Stevens, Simon & Lightfoot, J. A. Run & Co., Moore & Whitfield, John Taylor, R. Blunt & Sons, J. & S. Huskisson, P. Squire, Corby & Co., and C. A. Hopkins & Co.

CINCHONA AND OPIUM DUTIES.

Another trouble arose from the fact that, in the thirties, many crude drugs were subject to higher duties than the articles made therefrom—a circumstance which handicapped Messrs. Howard, Gibson & Co. and other English manufacturers very severely. Thus, in May, 1836, we find the Stratford firm memorialising the Lords of H.M. Privy Council for Affairs of Trade and Commerce on the subject of the difference in duties on raw cinchona-bark and quinine. The import-duty on bark was 1*l.* per lb., and to this had to be added an impost, known as South Sea Duty, levied on all goods from Pacific ports, and amounting, on cinchona-bark, to about $\frac{1}{2}$ *d.* per lb. Three pounds of bark, costing 4 $\frac{1}{2}$ *d.* duty, yielded at that time on an average only one oz. of quinine, or at the rate of about 2 per cent. Imported sulphate of quinine only paid a duty of 1*l.* per lb., manifestly insufficient in proportion to the raw material. The firm, with praiseworthy but scarcely quite logical moderation, asked that a duty of 6*d.* per oz. should be put on quinine, whereas by their own showing they were only 4 $\frac{1}{2}$ *d.* per oz. out of pocket in bark-duties.

With regard to opium, matters were much the same. The opium-duty was 4*s.* per lb. all round. Reckoning an average morphia render of $1\frac{1}{2}$ oz. to 1 lb. of opium, the opium-duty was equal to a tax of 3*s.* per oz. on morphia. The duty on imported morphia being only 11 $\frac{1}{2}$ *d.* per oz., Messrs. Howard, Gibson & Co. asked for the abolition of this "bounty of 2*s.* 0 $\frac{1}{2}$ *d.* per oz. given to the foreigner."

BORAX REMINISCENCES.

In Messrs. Howards & Sons' letter-book there is an interesting account of the introduction into commerce of Italian boracic acid from the Tuscan borax-lakes. Those lakes began to be exploited on a large scale about the year 1835, though the acid had been discovered as early as 1742. Before that time all borax-material was brought by a long route through India from Thibet. This material—tincal—is still met with in commerce, though it competes with difficulty with the more accessible deposits of Italy, Asia Minor, and Chili. In 1836 the borax-refiners, among whom the Messrs. Howards occupied even then a foremost place, were greatly exercised to know through whose hands the Tuscan boracic acid was going to be brought in trade. The principal lake had been acquired by a M. Lardarel, whose name the property still bears. In Messrs. Howards' letter-book is a copy of some communications sent by Grant & Co., of Leghorn, to David Taylor & Sons (then a Mincing Lane house of high repute), and communicated by the last-named house to their friends at Stratford. These documents give an interesting insight into the ways of company-building of those days.

We can now tell you [write Grant & Co. on March 14, 1836] how the operation stands. Lardarel is bound to deliver to Hepburn, Pullars & Co. 21,000,000 lbs. of boracic acid at a price somewhat above Liv. 41 (per ton) in seven lots from 1st January, 1837, to the end of June, 1839. Six months before the end of that period H., P. & Co. can denounce the contract and pay down Liv. 200,000 as *Caparra*, which is to be discounted gradually at each delivery as usual when advances are made. Besides these advances H., P. & Co. lend Lardarel Liv. 400,000 for 10 years at 5 p. c. Lardarel issues notes of Liv. 5,000, payable 10 years hence and paying 5 p. c. interest. H., P. & Co. expect to negotiate these notes and be freed actual disbursements. The first three millions of acid they have resold to W. Lloyd (the refiner) at about 50 Liv.

The price for refined borax kept high for many years after the Tuscan supplies had begun to be exploited. In 1841 Howards, Gibson & Co. received an inquiry from a Mr. H. J. Esszingh, at Cologne, for refined borax. They quoted him 72*s.* per cwt., but asked him to pass his order through some agent in London, "as we never ship goods to foreign ports." They meant, of course, that they would not deal with him direct. The result of the inquiry is not traceable in the book.

AN ANALYSIS BY JOHN ELIOT HOWARD.

The following entry (in the chemist's own handwriting) in the book probably records the first chemical examination of Tuscan borax in England:—

11 mo 24 1830

John Eliot Howard has examined a sample of refined Borax for D. Taylor & Sons, and finds it perfectly free from Muriatic Acid. 100 grains of the sample received were precipitated with Nitrate of Silver and afforded 75 grains of precipitate (borate of silver), entirely soluble in hot water, also in dilute nitric acid and affording, after this addition, no further precipitate with Nitrate of Silver. To prove the correctness of this test:

99 grains of the sample with 1 gr. muriate of soda were precipitated with Nitrate of Silver. The precipitate dissolved in dilute Nitric Acid, with the exception of 2.2 gr., evidently muriate of silver; which, by the scale of equivalents, are equal to $\frac{8}{10}$ gr. muriate of soda.

"RUM FROM SCOTLAND."

The complicated system of Excise and Custom duties which still existed at the beginning of the Queen's reign gave manufacturers a deal of trouble. On March 26, 1835, in the last days of William IV., a memorial was forwarded to the Lords in Council of his Majesty's Treasury, in which John Gibson, Robert Howard, John Eliot Howard, Robert Harrison Gibson, and John Kent called attention to the importation of rum from Scotland.

The memorial states that Howard, Gibson & Co. have long been manufacturers of certain medicines from spirit of wine—viz., ether, sweet spirit of nitre, and spirit of sal volatile—using 5,000 gallons of spirit per annum, for which they pay English duty; that in consequence of the competition from Scotland and Ireland without a tax to countervail the difference between the Irish and Scotch and the English duties, their consumption has fallen to 600 gallons a year; that they consider the advantage given to their Scotch and Irish competitors injurious to the Revenue and likely to induce fraud; and that they therefore ask the Revenue to put countervailing duties upon the non-English preparations. They say that in order to put the three countries on a fair basis, it would be necessary to levy the following duties:—

	From Ireland.	From Scotland.
	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>
On ether imported ...	12 11 per gall.	10 5 per gall.
On sw. spirit nitre ...	7 9 "	6 3 "
On sp. sal volatile ...	5 2 "	4 2 "

They further point out it is not necessary to have more than one rate of duty on each article, because the preparations ought to be made of one uniform strength, upon which the above-mentioned calculations have been based. The same plan, say the firm, has been adopted in the case of ether imported from Germany, which pays a duty calculated on two and a half times the duty of proof-spirit.

A CANNY SCOTCH MOVE.

The firm's efforts were successful, for, by Act of August 13, 1836, countervailing Excise duties were imposed on spirituous preparations sent into England from Scotland and Ireland, and drawbacks to the same amount granted on goods of the like nature sent from this country to Ireland and Scotland. The Bill, however, was badly drafted, and had consequences quite unexpected by its authors—consequences set forth by the *Edinburgh Evening Post* in a fine slogging article, headed "More Whig Bungling," and beginning in this promising manner: "The incapacity of the present Ministers, and the stupidity, or something worse, of their underlings and employés, afford a fertile theme for illustration." And then the "illustration" begins. It is to the effect that, owing to the low spirit-duties in Scotland and Ireland, a large manufacturing industry in varnishes, tinctures, perfumes, medicated spirits, British wines, &c., sprang up in those countries, the manufactured product being principally dumped down into the "adjacent kingdom of England." One firm alone of British-wine manufacturers at Leith sent 10,000 gallons of ginger-wine to England monthly. In the Act, as originally drafted, it was provided

that no "sweets or made wines" might be sent from one part of the kingdom to another which contained more than 11 per cent. of proof spirit, under pain of forfeiture; but this clause (on account, it is said, of pressure put upon the Lord Advocate by large ginger-wine makers among his Scotch constituents) was omitted from the Act. As the countervailing duty on "sweets or made wines" was fixed by the Act at 5*d.* per gallon, it thus became possible for the Scotch ginger-cordial makers to send over "ginger-cordial" containing any quantity of spirit to England upon paying 5*d.* per gallon only, get the stuff de-alcoholised in England, converted into ether there, and re-import that ether into Scotland, claiming from the English Excise 10*s.* 5*d.* per gallon, the amount of "countervailing drawback" established by the Act on ether made in England and sent to Scotland. It was all very canny of the Scots, but they let the cat out of the bag too soon, and measures were, of course, taken promptly to stop this defrauding of the Revenue.

THE COSTA RICA DRUGGIST.

Mr. Henry Deane was one of the most prominent London pharmacists of his day, and no chemist was more



esteemed by his brethren of the craft than the Quaker-proprietor of the well-known shop in Clapham. Mr. Deane was a frequent caller at Messrs. Hill's, in Southwark Street, with whom he dealt. He always carried a black bag, and would poke about at the wholesale druggists' in search of something of pharmacological interest. Mr. Deane was one of the best and most honest businessmen that ever lived, and an extremely attractive personality withal. In 1842 he happened, when at the seaside, to fall in with a Captain Lelasseur, who was the owner of three vessels that traded with Costa Rica, on the Pacific coast of Central America—the longest voyage known from London. The captain generally made his

way *via* the United States to the Atlantic coast of Central America, and then crossed overland to Costa Rica to await his ships and do his business. He imported all sorts of things into the Republic, and was so pleased with Mr. Deane that he invited him to become his supplier of drugs. Mr. Deane accepted, and by degrees he obtained control of pretty well the whole of the Costa Rica drug-business, often receiving shipping-orders to the extent of 3,000*l.* or more. As he could not do that trade from his shop at Clapham, Mr. Deane made an arrangement with Hill & Sons to put up and ship the goods for him. But, as the Messrs. Hill never made it known that they had anything to do with the business, the trade lapsed upon Mr. Deane's death, for the Costa Ricans did not know who put up the drugs nor where to send their orders.

SOME MEMENTOES FROM WHOLESALEERS.

DURING the past thirty-eight years the histories of most of the wholesale firms which were connected with the drug-trade at the Queen's accession have been related in THE CHEMIST AND DRUGGIST, which fact was never so forcibly brought home to us as when we communicated with the more prominent firms in regard to pre-Victorian mementoes of their business career. We confess some surprise when

we were told by some that we should find all that we wanted to know in THE CHEMIST AND DRUGGIST of such-and-such a date. Nevertheless there have come to us a few things of the kind which are always interesting, old price-lists, invoices, and the like, which we have not previously had the opportunity of examining.

We are not able to find room this week for all that we should like of the notes and illustrations which we have prepared; but we hope to print them in our next issue. Meanwhile we have to thank all the firms who have assisted us in this matter.

A PATENT COMBINE.

Messrs. Edwards & Son lend us price-lists issued by their predecessor, E. Edwards (father of the present senior in the firm), before 1820. E. Edwards described himself as "late Shaw & Edwards." The business was then carried on at 66 St. Paul's Church Yard, and in 1820 was removed to next door—67. There are some still familiar names in the old list, such as Henry's magnesia, Singleton's golden ointment, Roche's embrocation, Widow Welch's pills, Oxley's essence of ginger, Macassar oil, Ford's balsam of horehound, Cockle's pills, together with such permanent remedies as Daffy's elixer, Dalby's carminative, Friar's balsam, and Huxham's tincture of bark, the proprietary rights in which, if they ever existed, seem to have perished some time during the Queen's reign. Savory & Co.'s seidlitz-powders are quoted 2*s.* 2*d.* per dozen, to retail at 4*s.* 6*d.* There are among the more or less popular medicines of the day such discoveries as Sibley's solar tincture, in 7*s.* 6*d.* bottles, and Sibley's lunar tincture, at 4*s.* 6*d.* Dr. Smellorne's eye-ointment; Shaw, and Pierson, and Jackson land themselves out to cure the itch; there were Coxwell's concrete lemon-juice, Cheltenham efflorescent magnesia; there were pink saucers and Preston salts, Tooley's cordial, Tozer's pills, and Turlington's balsam, which suggest some of the articles our grandfathers in the trade dealt in. A curious feature of these old lists is that, as an appendix, is given several special lists of proprietaries belonging to the several then recognised patent-medicine houses. These are headed "The Agency or Proprietorship of the following articles are [*sic*] under their respective Firms." Then follow short lists of the medicines, &c., belonging to Messrs. Sutton & Co., Messrs. Newbery & Sons, Messrs. Barclay & Sons, and Mr. Butler. Somewhat later Mr. Butler—or Messrs. C. Butler & Co. as the firm had then become—misbehaved himself, for a heading is attached to a list dated 1830, stating that "Messrs. C. Butler & Co. having in a circular dated the 31st December, 1829, stated that they decline to supply the trade with sundry medicines therein mentioned, we beg leave to inform you, that you may know where to procure the genuine articles, that the following is an accurate statement to whom the different PROPRIETARY MEDICINES belong, or with whom the Agencies are placed; and that we shall be happy to receive as heretofore your commands for any which you may have occasion to order, and also for all genuine proprietary medicines, with the exception of those sold by Messrs. C. Butler & Co." This is signed by the other four firms.

THE FIRST SUNDRIES-HOUSE.

Messrs. S. Maw, Son & Thompson's history goes back thirty years before the Queen ascended the throne. George Maw was the founder of the firm. He was a Lincolnshire farmer's son, who came to London in 1807, and joined his cousin Hornby as a wholesale druggist. The partnership lasted for seven years, when Mr. Maw separated himself from his cousin, and bought a business in Whitecross Street (Lowe's), which was the only manufactory of surgical plasters in England. Here Mr. Maw founded the druggists' sundries business, the first of its kind in this country, so that we cannot claim this beneficence as a Victorian one. Mr. Maw had a son, Hornby Maw, who, after an indentured apprenticeship with a Croydon apothecary, attended St. Bart's, where the renowned Abernethy was one of his preceptors. He became a partner with his father in 1826, and as George Maw & Son they moved on to Nos. 55 and 54 Aldermanbury. In 1828 the senior retired, and Mr. Solomon Maw joined his older brother, the style becoming J. & S. Maw. It has already been put on record that they moved to Aldersgate Street, but that must be wrong, for we have before us the firm's catalogues of 1832 and 1834, which are dated from Aldermanbury. The first of these catalogues is entitled:—

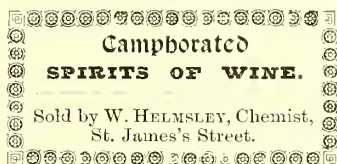
Catalogue of J. & S. Maw (late George Maw & Son), Manufacturers to the Navy, the Worshipful Company of Apothecaries, and Numerous Public Institutions, Nos. 55 & 54, Aldermanbury, London. 1830. Printed by J. Robins and Sons, Broad Street, Southwark.

It does not say what they were manufacturers of, but that is told in the preface—viz., that the catalogue “consists, in the First part, of a list of the most modern and approved Surgical instruments, Trusses, Veterinary Instruments, &c.” Part II. “consists of a very comprehensive list of Implements, vessels, &c., which are indispensable in the operations of Pharmacy, the Retailing of Drugs, and Dispensing of Medicine, many of which are not manufactured by any other House.” Following the index are eleven plates, beautifully executed, of enema apparatus, stomach-pumps, breast-pumps, blood-transfusion instruments, syringes, tincture-press (what is still used to-day), and druggists’ jars, bottles and infusion-pots. The first part occupies twenty-five pages. The second interests us especially. Here we find a full list of machine-spread cloth plasters, issue-plasters, corn plasters and eradicators, isinglass plaster, &c. Then come lint, 3s. to 5s. 6d. per lb., and pharmaceutical apparatus, the latter part having little in it which might not stand for requirements of the druggists of to-day. After a shudder at bleeding-basins, we pass over earthenware to chip and paper boxes, and come to “Chemical fire boxes, Matches, Floating lights, etc.”—a distinct curiosity. What, pray, were eupyrrions, at 9s. per dozen, and what were camphor matches that they should have brought from 11s. to 32s. per dozen, when enclosed in “ovals,” “octagons,” and “flat springs”? Here, too, are sulphurised matches at 2s. per 1,000. The list concludes on page 50 with “Sundries,” amongst them pewter-spouted basins for cooling decoctions, 4s. 6d. and 5s. 6d. each; Britannia-metal infusion-pots, with spouts to strain, quarts 6s.; and Gascoine and Contrayerva balls, 10d. per lb.

The 1832 catalogue is on the same size paper (32 no), but the title-page is specific. There are 114 pages in it, of which one-half is a new Part III., dispensing druggists’, perfumers’, and other labels, the firm having purchased the entire set of plates and stock of Mr. Palmer. This list is exceedingly comprehensive, and of rare historic value: altogether 1,628 titles and inscriptions for labels are mentioned, apart from a complete set of “ornamental Latin labels for drawers and bottles,” according to P.L. nomenclature. Examples are given, and we reproduce two of them:—

SPIRITS OF HARTSHORN.

Sold by J. TOMLINGSO, Chemist, &c.,
New Bond Street.



An important new engraving is added in the preface—viz., of Maw's improved double-valved inhaler. In the 1834 catalogue the most striking addition is a plate of stethoscopes, which were just about that time introduced. Laennec's, Davis's, and Elliottson's are amongst those figured. By this time the firm (which was now plain “S. Maw”) had removed to No. 11 Aldersgate Street, and the next engraving of the premises is reproduced from the 1839 edition of their catalogue. These premises, in a remodelled and restored condition, form a part of the magnificent warehouses in Aldersgate Street which were built under the supervision of Mr. Charles Maw, the present chief of the firm, who, though not actively engaged in business, takes a keen interest in it. He was admitted a partner by his father, Mr. Solomon Maw, in 1860, and he, three sons, and Mr. John Thompson now constitute the firm. The growth of the

business since 1837 may be judged by the firm's catalogues. Their illustrations of the present day form a thick quarto



volume, and the quarterly price-list is at least twenty times bigger than the list of 1834.

PEAR'S AND MATCHES.

Messrs. Barclay & Sons send us their “Catalogue of Genuine Patent Medicines and Miscellaneous Articles sold wholesale” by them, dated 1834. It contains twenty-four 16mo. pages, and is a much longer list than Edwards's. Pear's (not Pears') transparent soap appears in this catalogue. There is a special section for veterinary medicines, including Leeming's genuine horse medicines, prepared from the original recipes (late in the possession of George Bott, Nottingham) by Barclay & Sons, the sole proprietors. There is a column of sauces, and “Best Matches” are quoted at 3s. per 1,000, common ditto at 1s. 6d. per 1,000. Lucifers for segars are 7s. 6d. per 1,000.

We may appropriately conclude our notes this week with a reproduction of a photograph taken at 42 Cannon Street the other day of one of the colonial artillerymen who will take part in the commemorative procession next Tuesday. This is Mr. de Souza, a Trinidad druggist, one of the thirty Volunteers who have come from that island. Doubtless there may be other druggists playing a like part next week, but there can be none more picturesque than this khaki-jacketed and sombrero-capped giant who has laid down his pestle for a while to show his loyalty to the lady whose name is revered in every home in the British Empire.



Trade-Marks Applied for.

(From the "Trade Marks Journal," June 2, 1897.)

- Signature of applicant; for a mixture of materials for use as a filtering-medium for purifying water. By Dr. W. H. Barr, F.C.S., 2 Belgrave Place, Bury, Lancs. 202,703.
- "CAMBATH"; for perfumery, including toilet-articles, perfumed soap, &c. By E. Cook & Co., 10 Mark Lane, London, E.C. 203,161.
- "INOL"; for toilet-articles, including perfumed soaps. By Keene & Ashwell, 74 New Bond Street, London, chemists and druggists. 204,284.
- "PHROSINE SOAP"; for toilet-soap. By the Birch Vale Soap Company, Birch Vale, near Stockport. 204,422. Essential particular: the word "Phrosine."
- "PANGADUINE," and symbolical device; for lozenges, drops, globules, granules, pastilles, and syrups. By the Société Anonyme de la Pangaduine, 44 Rue Cambon, Paris, France. 202,517. Essential particular: the device.
- Combination of devices, and wording, on oblong label to fit malt-extract bottle; for medicated malt-extract, for human use. By the Distillers' Company (Limited), 12 Torphichen Street, Edinburgh, &c. 202,288. Essential particulars: the combination of devices.

Marriages.

CARTWRIGHT—HALL.—At Imperial Hotel, Edinburgh, on June 10, by the Rev. Neil G. McArthur (brother-in-law of the bride), assisted by the Rev. J. Barr-Pollock, Benjamin Cartwright, chemist and druggist, Galashiels, to Mary Anna Frances, third daughter of Mr. Adam Hall, J.P., manufacturer, Fairfield, Newtown Street, Boswells.

CHAPMAN—COLE.—On June 9, at Bar Church, Scarborough, by the Rev. J. Robertson, Mr. Henry Ascough Chapman, second son of Mr. Henry Chapman, chemist and druggist, Newborough Street, Scarborough, to Miss Florence Annie Cole, only daughter of Mr. J. A. Cole, of Victoria Road, Scarborough.

EVANS—WICKHAM.—At the Church of the Holy Trinity, Brooklyn, N.Y., on April 21, Mr. William J. Evans (McKesson & Robbins) to Julia Hutchinson Wickham, sister of Mr. W. H. Wickham, of McKesson & Robbins, New York City.

GREEN—SEABURY.—On June 2, David E. Green, jun., to Rena, daughter of Mr. George J. Seabury (Seabury & Johnson), New York.

JONES—TAYLOR.—On June 9 (by licence), at St. Lawrence's Church, Reading, by the Rev. J. M. Gilding, Driver Fitzherbert Jones, chemist and druggist, grandson of Sir Anthony Fitzherbert, to Amelia, second daughter of Mr. Taylor, The Grove, Reading.

MUSKETT—THOMAS.—On June 9, at the Friends' Meeting-house, Bristol, Frederic J. Musket, pharmaceutical chemist, Rochester, to Mary, eldest daughter of William Thomas, Stokes Croft, Bristol.

RALPH—HAWKIN.—At the Stoke Church, on June 8, by the Rev. Mr. Stephens, Frank Horatio Ralph, chemist and druggist (Messrs. Breeze & Co., Plymouth), to Miss Edith Hawkin.

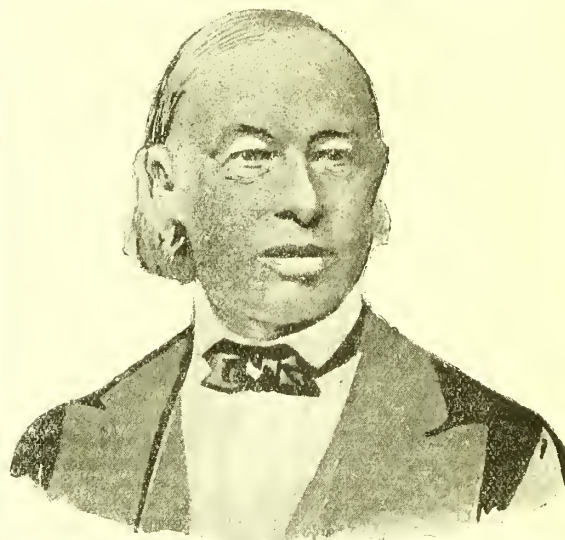
Deaths.

BUCKLEY.—On May 26, Mr. Samuel Buckley, retired chemist and druggist, Old Trafford, Manchester. Aged 91.

CLATER.—On May 18, Mr. Francis Clater, chemist and druggist, Retford, Notts. Aged 78.

FRESENIUS.—At Wiesbaden, on June 10, Professor Carl Remigius Fresenius, the principal of the school of chemistry there. In his 79th year. The cause of Professor Fresenius's death was an apoplectic seizure. As a chemist he was known to three generations of English chemists, his well-known text-books on qualitative and quantitative analysis

having been used in the English translations in Britain for many years; while a large number of English and American students entered his laboratory at Wiesbaden every year. Fresenius was born in Frankfort on December 28, 1818, and after the usual scholastic career in the local



institute he studied at Bonn, then at Giesen, under Liebig and from 1841 to 1843 he pursued researches in chemistry. In 1845 he was appointed Professor of Chemistry, Physics, and Technology in the Wiesbaden Institute, and there he had laboured continuously since.

GRIFFITH.—On May 30, Mr. James Griffith, chemist and druggist, Newport, Pem. Aged 83.

RODGER.—A singularly gifted young chemist has passed away in the person of James Wyllie Rodger, A.R.C.S., F.C.S., who died at the beginning of this month, in his 30th year. Up till a year ago he was a frequent speaker at the Chemical Society meetings, and both young and old were impressed by the combination of rare intellectual insight, chemical knowledge, fluency of speech, and physical attraction which he exhibited. Mr. Rodger was a native of Stewarton, N.B., and after his education at Kilmarnock Academy, he entered as a student at the Royal College of Science, where he carried all before him, spite of the fact that his studies were frequently interrupted by illness. Before he was 22 he was appointed assistant in the Research Laboratory of the Royal College, and then began a mass of work in association with Professor T. E. Thorpe and others, which soon gave him a front place amongst chemical experimentalists and thinkers. He delivered the Bakerian lecture to the Royal Society in 1894, and, young though he was (no other man has been selected for that high honour at so early an age), his exposition of "the relations between the viscosity of liquids and their chemical nature" was regarded as one of the most brilliant pieces of work ever brought before the Royal Society. Professor Thorpe was associated with him in the matter, and his last contribution to science was a joint paper by them communicated a few weeks since to the Chemical Society (of which Mr. Rodger was a councillor).

SMITH.—On April 29, suddenly, at Victoria, Australia, Robert Smith, L.A.H., late of Dublin. Aged 33.

WOOD.—On May 26, Mr. James Wood, chemist and druggist, York. Aged 65.

BUSINESS in London just now is almost at a standstill, and the streets are crowded from morning to evening with sight-seers, who watch the progress of decorations, &c. Next week matters are expected to be worse, and it is felt that business will not begin to get back to its normal level until Tuesday's ceremony is over. That day is, of course, a public holiday, but some firms are giving their employes Monday as well. Messrs. Barroughs, Wellcome & Co. are doing that, and their city offices and Dartford works will be closed from Saturday until Wednesday.

Trade Reports.

42 CANNON STREET, E.C., June 17.

THE drug-market, like all other departments of the produce-trade, has been extremely quiet since our last report, and will practically be closed until the end of next week owing to the Jubilee festivities. Among the chief features in the chemical-market are the continued steadiness of citric and tartaric acids and of quinine. Iodine rather firmer. Cream of tartar is a trifle weaker. Refined camphor is quiet; for the crude article slightly firmer rates are quoted. Chlorate of potash is a trifle steadier. Sulphate of copper and carbolic acid are tending lower; benzols a shade firmer. Sulphur very steady. Soda salts generally unaltered. Arsenic somewhat more plentiful. In the drug-market there has been a rather considerable business, at full rates, in asafetida, chiefly for America. Buchu-leaves have also been in strong demand, and rhubarb has sold at steady prices. Balsam tolu is firm, Copaiba quiet, Peru unchanged. Cardamom-seed inquired for. Calumba firmly held for high prices. Chinese star anise scarce and tending dearer. Quassia firm at the recent advance. Castor oil well held. Chinese soy quiet, but steady. Gentian-root is still tending upwards. Ergot of rye very steady. Ipecacuanha very firmly held. Jalap steady. Menthol is very flat. Cod-liver oil also neglected. Star-anise oil steady, with a firmer tendency. Cajuput oil is higher. American and Japanese oil of peppermint quite neglected. For opium there has been some inquiry, but the market is unchanged. There have been some arrivals of sarsaparilla. Quillaia remains very firm. In the drysaltz, oil, and spice markets there are few alterations to report. Chinese galls are firm, and Turkish held for high prices. Gambier is rather easier. Orange shellac sold at an advance (compared with the auctions of four weeks ago) of about 7s. or 8s. per cwt. At the isinglass-sales East Indian kinds were steady, but common Brazilian lump about 1*l.* to 2*l.* per lb. easier. Japan wax is extremely firm. Quicksilver quiet, but unchanged. In spices we have to report lower rates for black pepper on the spot, while white pepper is rather quiet. Pimento quiet, but firm. Jamaica ginger of the new crop is in very large supply, and prices at auction were from 2s. to 3s. per cwt. lower on all kinds, excepting fine, which remained steady. Cochin ginger is dull of sale and lower for native cut. Japan ginger very flat. Cloves are quiet, chillies steady, mace and nutmegs dull. In the oil-market there has been a further slight advance in linseed oil on the spot. Crude rape oil remains quiet on the spot, and steady for shipment; refined oil is rather dearer. Cotton-seed oil firm, both for crude and refined. Ceylon cocoa-nut oil has advanced about 3*d.* per lb., spot being now 21s. 6*d.* Cochin oil also slightly higher for arrival. Olive and Palm oils are unchanged. Turpentine is firm, and petroleum dull at unaltered prices.

The Iodine Syndicate are, it appears, doing their utmost to crush the competition that has arisen in Japan, where sufficient iodine can be made (from kelp) to supply not only the country itself, but a good part of the requirements of foreign markets. A Yokohama correspondent writes to us on this subject as follows:—"Here in Japan the agents of the Iodine Convention have tried, and are trying, their best to check the increasing Japanese production, and to prevent an outflow of it to the London market. Their tactics are to make great and sudden fluctuations of their selling-prices. When the Japanese producers are fully stocked with material—viz., in the producing season—the Syndicate suddenly reduce their price considerably, thus compelling

native producers to stop making. When the season is all over the Syndicate price is again suddenly advanced. Of course, if the native producers were all poor, this policy would succeed, but there are rich people concerned in the industry, who will never abandon their object, and are strong enough to wait for the time when prices will advance. At present it seems as if the Convention's policy would not succeed after all. Japan can now produce ample iodine, with a prospect of steady increase, so that she must find a market for her surplus. Japanese iodine preparations can easily compete with those of Europeans, as the cost of production is very low. Having such an advantage Japan must soon become an exporter of iodides as well as other chemicals."

The chemical-works at St. Helens, Runcorn, and Widnes are fully occupied at present, and the fears that the factories would close at Whitsuntide for a considerable time have proved groundless. In Flintshire the lead-mining industry is also reviving rapidly. Brunner, Mond & Co. have lately secured three leases of mining-properties, and much activity prevails at other works, notably at North Hendre, where work is proceeding night and day. Shares in certain mines which a few years back could have been bought at 2s. 6*d.* are now worth over 10*l.* The announcement by Sir J. Brunner, M.P., with regard to the working of zinc properties is regarded as encouraging. From the reports of experts it appears probable that the lead-mines will be kept busy for some years.

Messrs. Nascio, Aveline & Co., manufacturers of citric acid write from Messina that the present selling-price of citric acid is barely equal to the cost of producing the drug. They work it out this way:—The theoretical yield of one pipe of conc. lemon-juice (of 108 imperial gallons) at 64 oz. of acid per gallon is 432 lbs. But in practice it is from 15 to 20 per cent. less, according to the season and the expertness of the manufacturer. There is also a trade-discount given on citric acid, to meet which a further 5 per cent. must be deducted from the yield—i.e., in all 20 per cent., or 108 lbs., leaving a net result of 324 lbs. At 12*l.* 5s. per pipe this makes the prime cost of crude citric acid 9*d.* per lb. The cost of manufacturing, packing, &c., is close upon 4*d.* per lb., making a total of 13*d.* per lb., or, say, the same as the present selling-price.

Our Hamburg correspondent telegraphs on Thursday afternoon that *Refined camphor* is quoted at Hamburg Telegram. 272-50m. per 100 kilos. *Funugreek-seed* shows an advancing market, at 19m. per 50 kilos.

Our New York correspondent telegraphs on Thursday afternoon the following market changes:—*Mexican sarsaparilla* is quoted at 4½c. per lb., *Vera Cruz jalap* New York Cablegram. at 8½c. per lb. *HGH American oil of peppermint*, in bulk, is plentiful at 105c. per lb. All the foregoing show a weak market. *Honduras sarsaparilla* is now offering at 28½c. per lb. The stock in New York is estimated at 430 packages. *Oil of sassafras* is quoted at 31c. per lb., sassafras bark at 5½c. *Wahoo bark* of root 12½c., and *Blackhaw bark* at 6½c. per lb.

ACID (CITRIC).—Firm at 1s. 1½*d.* per lb.; *Concentrated juice* at 12*l.* 5s. per pipe, f.o.b. The shipments of *Lemon* and *Bergamot* juices from Messina in May were 469 pipes. They have been brisk for several months, and the stock is said to be much smaller than it was at the same time of last year. *Citrate of lime* is not offered in Messina at present.

ACID (TARTARIC).—Steady at 1s. 1½*d.* per lb. for B.P. acid from the makers, and 1s. 1*d.* per lb. for foreign brands on the spot.

ARSENIC is still pretty firmly held, but supplies are coming to hand rather more freely; 23s. 6*d.* to 24s. per cwt. are the current quotations for best white English powder.

ASAFCETIDA.—A sudden demand has set in since Monday, both from the Continent and the United States, with the result that about 300 cases have been sold at prices running from 45s. per cwt. for very common up to 67s. 6d. per cwt. for good softish. Fine pinky quality is held at extreme prices, holders being reluctant to sell. The common and medium grades which have changed hands are mostly to be shipped to the Continent, the better qualities to America. Altogether, about two-thirds of our available supply has been disposed of, leaving about 100 cases and 60 boxes for sale in London. It is said that the chief holder could have cleared his entire stock if he had been willing to accept a bid of 2s. 6d. per cwt. below his limit.

BALSAM PERU.—Good quality offers at 8s. per lb.

BALSAM TOLU.—Fine hard old-fashioned tolu has been sold at 3s. 2d. per lb. There are only a few cases left now, for which 3s. 3d. is asked. Soft quality, in large tins, has changed hands at 2s. 6d. per lb.

BORAX.—The price of *Howards'* refined borax has been reduced 3s. per cwt.; crystals, in lots of at least 5 cwt., being now quoted at 17s. and powder at 19s. per cwt. For *Boracic acid*, same brand, the prices have been reduced 4s., crystals being quoted at 26s. and powder at 28s. per cwt. Wholesale quantities of between 1 and 5 cwt. are charged 1s. extra.

BUCHU.—A sudden American demand has shown itself for this article, of which a considerable quantity, variously stated at from 40 to 60 bales, has been sold. For fair, slightly yellowish, round leaves 3½d. per lb., and for fair green 3¾d. per lb. It is thought that the purchases have been mainly made for account of a Detroit firm.

CAMPHOR (CRUDE).—The market is slightly firmer, but no business is reported for Japan camphor. The spot quotation is about 102s. 6d., and for shipment the price runs from 97s. 6d. to 99s. per cwt., c.i.f. terms. The spot quotation for *Formosa* camphor is 95s., and for arrival 90s., c.i.f., is asked.

CARDAMOMS.—There have been several inquiries, especially for seed.

CREAM OF TARTAR.—Dull of sale, with a slightly easier tendency, at 78s. 6d. per cwt. for best white French crystals, and 81s. to 82s. per cwt. for powder.

CUBEBS.—Messrs. Dodge & Olcott, of New York, inform us that the large shipment of 476 bags which arrived in London at the end of May by the *Telamon* from Java was purchased by them and shipped on through bill of lading to America, and that they have a further shipment of 441 bags coming to them by the *Ajax*. The last-named will also presumably come *via* London, and they wish to point out that as they do not sell these cubebs, but consume them in their manufacturing operations, the London market, at any rate, is not likely to be affected by these shipments. The parcel in question (441 bags) has actually arrived here this week, not indeed by the *Ajax*, but by the *Patroclus* from Amsterdam.

ERGOT OF RYE.—In fair demand. For good new *Russian* 6d. per lb. is asked, and 6½d. for fine quality.

GALLS.—The advanced quotations made by importers have checked business, and blue galls are for the moment neglected, though held at the high figure of 52s. 6d. to 55s. for good quality. There is some demand for green and white galls, the former at from 43s. to 47s. 6d., the latter at from 42s. 6d. to 45s. per cwt. Of *Chinese* galls, sales have lately been made in plump-shaped quality at 57s. 6d. per cwt., c.i.f. terms; and on the spot at 65s. per cwt.

GAMBOGE.—Our stock has been further reinforced by the arrival of 33 cases by the *Glaucus* from Singapore.

GENTIAN-ROOT.—Extremely scarce. Good *French* root has realised as much as 32s. per cwt. on the spot, and some holders now talk of requiring 34s. as a minimum price.

GUM ACACIA.—The recent large arrivals of so-called "insoluble" *Persian* gum are now being put on the market, and a portion of it has been sold at full prices. Fine picked is quoted at from 21s. to 23s., red ditto at 18s. to 19s., sorts at 14s. to 18s. 6d., siftings at 10s. 6d. to 17s., and block at 8s. to 11s. per cwt.

INSECT-FLOWERS.—The new crop has now arrived on the

Trieste market, and some sales have been made at extremely high rates, but it seems generally expected that a decline in prices is imminent.

IODINE.—It is reported that the new firm of Scotch manufacturers have joined the syndicate, and in consequence there is a better feeling in the market. It seems doubtful whether it will be possible to advance the price of resublimed iodine to 9d. per oz. again. It is said that the tendency is rather in favour of an increase.

IPECACUANHA is very firmly held, but there is very little business in the article at present. The price of good plump *Cartagena* root is 5s. per lb. For good to fine *Rio* from 6s. 6d. to 7s. per lb. is quoted, although it is doubtful whether anything could be had at the first-named figure. The absence of arrivals of the new season's *Brazilian* root is much commented on. As a rule, parcels of some importance begin to arrive in May. The only arrival declared this week is one of 11 packages *Colombian* root by the *Orinoco* from Panama.

JALAP.—The 6 bales sold at 4½d. last Thursday were all damaged or wormy. For sound *Vera Cruz* jalap 4¾d. was bid at the sales and refused, the lowest quotation for this variety being 5½d. per lb.

MENTHOL.—A dull market, nominally at 5s. 6d. per lb. on the spot.

NUX VOMICA.—The following parcels have arrived since last week: 419 bags by the *Ulan Alpine* from Cochin, 54 by the *Goorkha* from Madras, and 42 by the *Glaucus* from Colombo. Ordinary to good bold Madras is quoted at 6s. 6d. to 7s. 6d.; ordinary to medium Bombay at 6s. to 6s. 6d. per cwt.

OIL (COD-LIVER) shows no alteration, 70s. per barrel, f.o.b., is the nominal price for good new non-congealing. For fine *Newfoundland* oil 3s. per gallon has been quoted, but it is doubtful whether it is possible to sell at that figure.

OILS (ESSENTIAL).—Two packages of *West Indian* oil of limes have come to hand this week from Dominica. *Lemon-grass* oil of fair quality offers at 2½d. per lb. on the spot. *Nutmeg* oil quiet, at 3½d. to 4d. per lb. for ordinary to good white. *Cajuput* oil is reported dearer, 2s. 11d. to 3s. per bottle being asked. *Japanese peppermint* oil extremely flat, and quotations more or less nominal at 3s. 9d. per lb. for 40 per cent., and 2s. 3d. per lb. for dementholised oil on the spot. For shipment about 3d. per lb. below these figures is asked. *Star-anise* oil fairly firm at 6s. 9d. per lb. on the spot, and 6s. 3d., c.i.f., July-August shipment.

OPUM.—Very little business appears to have been done, although there have been several inquiries, mainly from America, all of which are said to have been at very low limits. The prices are practically unchanged.

QUICKSILVER.—Quiet but steady in second-hand at 7l. 7s., while the importers' price remains unaltered at 7l. 7s. 6d. per bottle. There has been an arrival of 6,200 bottles from Spain, besides smaller consignments from Russia and Italy.

QUININE.—Steady; 9d. per oz. appears to be the nearest spot price for *German* bulk in second-hand, but new *Tailandier's* quinine offers at 8¾d. per oz.

RHUBARB.—There have been several arrivals this week, consisting of three consignments, totalling 90 cases. Privately it is said that a good business has taken place, a portion of the new *Canton* root which was to have been offered at the auctions last week, but did not arrive in time, having been sold at full prices, ranging up to 1s. 9d. per lb. for good medium size, round and flat root of good fracture. Sales of *High-dried* have also been made at steady rates, and the prices at which this root offers for arrival is said to have been somewhat advanced last week. Up to that time the China importers offered fair *High-dried* at 1s. 1½d. per lb.; now they say they will no longer sell at that figure. *Shensi* firmly held. For fair medium round 2s. 4d. per lb. is quoted, and for fine trimming root the extreme price of 3s. 6d. per lb. is asked.

ROSE-LEAVES.—*French* leaves of the new crop are offering at 116s. per cwt.

SANDALWOOD.—A very quiet market. Good to fine *Madras* logs are quoted at 35l. to 50l.; chips at 5l. to 7l. 10s. per ton.

For *Bombay* wood the quotations are respectively 25*l.* to 35*l.*, and from 10*s.* to 60*s.* per ton.

SARSAPARILLA.—Our imports this week consist of 29 packages by the *Orinoco* from Panama, and 19 by the same vessel from Colon. These parcels will probably be offered at the next auctions. They are said to consist of grey *Jamaica* and *Lima-Jamaica*.

SCAMMONY.—Fair bold scammony root is held privately for 35*s.* per cwt.

SHELLAC.—The market this week opened very strong, but on the spot very little business was done pending Tuesday's auctions. On that occasion 984 chests were offered, of which 689 met with good demand at an advance, on second orange, of 7*s.* to 8*s.* per cwt. on the last sales (four weeks ago). The following were the quotations:—Fine lemon orange, 81*s.* to 82*s.*; good to fine pale (the latter eakey), 65*s.* to 68*s.*; good palish, 61*s.* to 62*s.*; medium to fair flat red, 57*s.* to 61*s.*; ordinary weak eakey, 55*s.* to 57*s.* per cwt. *Garnet* lac, blocky thin OCC, realised 54*s.* to 55*s.*; blocky first button, 58*s.* per cwt. The spot-value of fair TN second orange is now 62*s.* and of AC *garnet* 68*s.* per cwt. The speculative market has been quiet, with sellers of TN orange, September delivery, at 64*s.* per cwt. For arrival there are buyers at 61*s.* per cwt., c.i.f., for May-June.

SULPHUR.—In the beginning of this month the prices in Messina advanced somewhat, after having been unchanged for several weeks, because an exporter was short for immediate shipment. The Anglo-Silician Sulphur Company are not sellers at the present quotations, and there is comparatively little sulphur offering. The arrivals of sulphur from the new smeltings will not begin to be large until September. Foreign flowers are quoted at 6*l.* 5*s.* per ton in London, roll at 6*l.*, recovered at 95*s.* per ton, f.o.b.

TAMARINDS.—*West Indian* remain exceedingly dull and low in price. At auction on Wednesday 439 packages were offered, but only a few lots sold at 18*s.* 6*d.* for fine fresh *Dominica*, and from 10*s.* to 13*s.* per cwt. for dark to fair *Antigua*. Of *Barbados* tamarinds nothing was sold. *East Indian* tamarinds are quoted at 7*s.* to 8*s.* 6*d.* per cwt. for medium to good black Calcutta, and 4*s.* to 6*s.* per cwt. for ordinary Madras.

WAX.—*Japan* firmly held at 45*s.* per cwt. for good pale squares on the spot. Near at hand offers at 37*s.* to 38*s.*, c.i.f., and July-August shipment at 35*s.* per cwt., c.i.f.

The Market in Heavy Chemicals.

There is little of special note to report this week as regards the heavy-chemical market. A steady, if not particularly heavy, demand exists for all the main products, and values are firm and mostly unchanged. *Chlorate of potash* has improved slightly, and is now quoted 4*d.* *Cream of tartar* easy: crystals, 78*s.* 6*d.*; powdered, 81*s.* to 82*s.* *Sulphate of ammonia* steady, with quotations practically unaltered. *Benzols* firmer: 90-per-cent., 1*s.* 10*d.*; 50-per-cent., 1*s.* 11*d.* to 2*s.* *Sulphate of copper* lower, 15*l.* 7*s.* 6*d.*; Anchor, 16*l.* 10*s.*; Liverpool, 16*l.* *Soda crystals*, *Bleaching-powder*, and *Caustic soda* continue to move steadily. *Recovered Sulphur* maintains a firm position, but is in rather better supply. *Nitrate of soda*, refined, is now quoted at 7*s.* 10½*d.*, ordinary 7*s.* 6*d.* to 7*s.* 9*d.* *Arsenic*, 24*l.* *Borax*, powdered, 16*s.* 6*d.*; crystals, 16*s.* *Boric acid*, powdered, 27*s.* to 29*s.*; crystals, 25*s.* to 26*s.* *Hyposulphite of soda* in fair demand at late figures. *Green copperas* quiet; Welsh make, however, is particularly scarce. *Alum*, crystal and powdered, dull. *Sulphate of alumina* in fairly good demand and unchanged. *Carbolic acids* tend easier. The quotations are now: erude, 75-per-cent., 2*s.* 4*d.* to 2*s.* 5*d.*; 60-per-cent., 1*s.* 11*d.* to 2*s.*; crystals, 34–35° C., 7½*d.*; and 39–40° C., 7¾*d.* *Anthracene* weak, B grade 4½*d.*, 20 A 6*d.* *Aniline oil*, 6*d.*; *Salts*, 5½*d.* Both are very quiet.

The Liverpool Drug-market.

Our Liverpool correspondent, writing on June 16, reports that *Castor oil* is steady at the late figures, the tendency being slightly towards greater easiness. Good seconds Calcutta are held for 3½*d.* to 3¼*d.* per lb.; first-pressure French, 2½*d.* to 3*d.* per lb.; Madras, 3½*d.*; and second-pressure, 2½*d.* per lb. Sales of new arrivals of Chilian *Honey* have been effected during the week, at 19*s.* 6*d.* and

21*s.* 6*d.* for piles 3 and 2 respectively, and all grades are well held at the moment. In *Gums* the advance in the value of Soudan sorts is maintained, but the demand is rather fitful, buyers once more showing a lukewarm interest in the article, and the sales are of a retail character. *Balsam copaiba*, Maranhão, held for 2*s.* 1*d.* per lb. *Tonea beans* are unchanged at late rates. *Paras*, 1*s.* 6*d.* for good black to 3*s.* for fine frosted. *Russian anise* is selling at 15*s.* 6*d.* per cwt. for good quality.

The Amsterdam Market.

Our Amsterdam correspondent gives the following particulars with regard to last Thursday's sale, of which the result was announced shortly in our telegram last week: The cinchona auctions were very quiet all through, contrary to the general expectation. It is quite evident that the combined manufacturers were determined to keep down the price and to abstain from buying rather than raise the unit. The consequence of this was that the largest buyer, who generally has speculative orders in addition to those for his factories, was able to obtain one-third of the quantity offered without advancing the unit above 4.20*g.*, against 4.10*g.* at the last sales. The unsold parcels are held for 4.50*g.* per unit. There is some idea that the quinine-makers' attitude is meant to frighten second-hand holders here (who hold about 18,000 packages) into accepting the small profit that the present unit would yield most of them, but it is not likely that any will be tempted. The richest parcel of bark in the sale was one of 20 bales of crushed *Ledgeriana*, analysing 8.51 per cent. This realised 36*g.* per half-kilo. *Druggists' barks* were in good demand at higher prices. This applies especially to broken quills and *Succirubra* chips and dust, which realised a unit of about 7*c.* Fine quills also found ready buyers, but medium varieties are quiet. We understand that, since the sales, bids have been refused on the basis of the sale-prices for several lots bought in at the auctions.

The Hamburg Drug-market.

Our Hamburg correspondent, writes on June 15:—"Business continues still very dull here, and the drug-trade does not make an exception to the rule. *Antimony* is steady at 39½*m.* to 40*m.* per 100 kilos. *Citric acid* is firm at 246*m.* per 100 kilos. *Tartaric acid* unchanged at 226*m.* to 230*m.* per 100 kilos. *Balsam copaiba* is rather easier at 4*m.* per kilo. for Maracaibo. *Balsam Peru* quiet at 15*m.* per kilo. *Balsam Tolu* is steady at 5½*m.* per kilo. *Camphor (refined)* does not show very much business; spot is quoted 275*m.*, July 270*m.*, August 265*m.*, September-December 260*m.* per kilo. *Anise (Russian)* is a little firmer at 30*m.* per 100 kilos. *Cumin-seed (Malta)*, new crop, is held for 41*m.* to 40*m.* per 100 kilos. *Turpentine* is firm and scarce: spot is held at 45½*m.*, July at 44½*m.* per 100 kilos. *Star-anise* is quiet at 165*m.* per 100 kilos. *Spermaceti* quiet at 295*m.* per 100 kilos. *Japan wax* is firm; spot delivery is held for 74*m.* to 75*m.* per 100 kilos., June-July shipment, 78*m.*."

The Smyrna Opium-market.

Our Smyrna correspondent writes, under date of June 5:—"The continuous rains that are falling (a very unusual thing at this season) are said to be doing a deal of harm to the crop in the low-lying districts. In the upper districts, however, where the crop is always about a month later, rains are rather wanted just now, and therefore it is likely that what will be lost in one district will be gained in the other. The sales of old *Current* and *Yerli talequal* within the past fortnight amount to 45 cases, at the parity of 8*s.* per lb., f.o.b., for *Current* and 8*s.* 1*d.* to 8*s.* 2*d.* per lb., f.o.b., for *Yerli* opium. The market is slightly firmer, and nothing was obtainable to-day at the figures quoted above. Speculative dealers are offering new-crop current opium for August delivery at 7*s.* 1*d.* per lb., f.o.b., but up to the present they have not found any buyers. Unless fresh orders are received soon it is likely that the market, especially for old opium, will continue to decline. Harvesting has begun in some of the low-lying districts, and two or three baskets of new-crop opium are daily expected here."

ARTHUR LEWIS POINTING, the druggists' sundriesman who sold patent elevators (bits of cork) for 3*s.* 9*d.* and 5*s.* 6*d.* per pair, was at Bow Street Police Court, on Thursday, committed for trial on the charge of fraud.



In writing letters for publication, correspondents should adopt a concise, but not abbreviated, style. They are requested to write on one side of the paper only. Letters, with or without a nom-de-plume, must be authenticated by the name and address of the writer. Queries should be written on separate pieces of paper, and the regulations printed under the sections to which they apply should be strictly observed.

Winchester Measures and Bottles.

SIR,—With reference to your note of June 5, permit me to point out that the so-called "Winchester" gallon, quart, or pint is not a measure of capacity, but is simply the name of a particular kind of bottle or vessel used for storing liquids. For instance, in the catalogue of a maker of chemical apparatus we find such a reference as the following:—

Acid bottles, blue or green glass, Corbys and Winchesters.

Generally the Winchester-quart bottle holds about twice as much as the Imperial quart. Whether the expression "Winchester" was derived from the name of a place or of a manufacturer I regret I am at present unable to say. The ancient Winchester quart or one-quarter of the Winchester gallon contained 68.06 cubic inches.

The Winchester bottle appears therefore to be another instance in which the vessel in which the liquid or article is placed or packed becomes in the trade recognised as and confused with a measure.

Yours faithfully,

7 Old Palace Yard, S.W., June 14. H. J. CHANEY.

Colonial Cutting.

SIR,—As there are frequent complaints of extreme "cutting" from many firms in Africa, India, and Australia, and as we are not aware of any successful plan having been put into operation which would effectually minimise or remedy the evil, will you allow us through your columns to drop the hint that any suggestions from the trade in foreign parts would no doubt be very highly appreciated by a large number of home manufacturers? It may be that there are one or two houses who have succeeded in maintaining their prices abroad, and that we are not aware of the fact. If such is the case, perhaps they will not be averse to giving your readers the full benefit of their experience.

We remain, Sir, yours faithfully,

IXON & Co. (142/43.)

Fatal Accidents under Chloroform.

A correspondent (141/85) writes that the unprecedented increase in the number of deaths under chloroform may be due, in a great measure, to the laxity which is allowed to prevail at coroners' inquests in these cases. Though the truth of the conclusion arrived at by the highest authorities is that these deaths are alone caused by too much vapour of chloroform in the air the patients were breathing, the significant word "overdose" is not even alluded to at these inquests, of which not fewer than forty-six have been held and reported for this country alone since the beginning of this year, at which, in every instance, the innocent but uninformed jury was led to exonerate the giver of the fatal overdose from all blame. As under such deplorable circumstances no opportunity is given for suggesting means or measures for preventing such accidents in future, an increase in their number must naturally be the result. After fifty years of its mis-administration and abuse of its power for good, it appears to be high time that a public inquiry should be made in the matter of chloroform administration—all the more so, as Dr. John Snow demonstrated nearly fifty years ago that if the chloroform is properly diluted with air each patient will gradually inhale the requisite amount of chloroform, and not a minim more, which in him suffices for causing insensibility to any surgical operation. We also know from Snow that 18 minims of chloroform absorbed by an adult is all-sufficient for the purpose of anæsthesia, that

24 minims produce the deepest degree of anæsthesia ever required, that 36 minims must be present at one time in the blood to cause arrest of respiration, and that some more minims of the chloroform must be present in the blood to cause final death by arrest of the heart-action. It is therefore evident that the safety of a patient under chloroform depends entirely on the mode and manner in which a given amount of this potent agent is administered in a given time. It may be well meant to take pity upon the unfortunate giver of an accidental fatal overdose, but that is not justice to the friends of the victim of the overdose, neither will administration improve unless the administrator of an overdose is censured for having caused the death of the victim of the overdose.

DISPENSING NOTES.

This section is intended for the elucidation of dispensing difficulties. Subscribers and their employés may contribute to it, criticising any of the following notes or contributing notes on prescriptions which they have found to be of unusual interest.

Indian Prescription.

Pulv. glycyrrhiz. co. (modified) ... 3ij.

Sig.: 5j. horâ somni.

SIR,—Can any of your readers who have seen service in India give a form for above? Yours,

RITA. (144/34.)

Zinc Oxide with Carron Oil.

SIR,—Your correspondent "G. M." will have no difficulty with this prescription, making it as follows:—Stir the zinc oxide and lime-water in a mortar, add all the olive oil at once, and triturate. This at once produces a nice cream of soft-ointment consistence. Of course the lime-water must be in good condition and not unduly exposed to the air during manipulation. I have seen this formula combined with ichthyol, and it is curious to note that, if made as above and the ichthyol added last, a very satisfactory thin cream results; but if the oil be added last, the ingredients immediately "take sides" in the most hopeless fashion—the oil and zinc oxide coalesce and separate entirely from the black watery mixture of lime-water and ichthyol.

Yours truly,

35 Clifton Road, Maida Vale, W.,
June 11.

R. H. PARKER.

Troublesome Suppositories.

SIR,—Is it possible to prepare the following without deviating from the prescription? If not, should like suggestions:—

Plumbi iodid....	...	...	gr. ij.
Tannin. ....	...	...	gr. ij.
Iodoform. ....	...	...	gr. i.
Ol. eucalypt. glob.	...	...	℥v.
Ol. theobromatis	...	...	q.s.

Ft. suppositoria. Mitte xij.

Faithfully yours,

COCOA. (137/10.)

[This prescription does not look very inviting, but by using wax or spermaceti instead of the ol. theobrom.—which you will be perfectly justified in doing under the circumstances—we think you will be able to turn out a decent suppository.]

Cocaine and Zinc-chloride Solution.

SIR,—After writing you I had another snap-shot at the prescription, as the solution was urgently needed. I measured glycerine ʒss., added to this from a solution of zinc chlor. in stock (dissolved by the aid of acid. mur.) mxxxvij. (gr. ij. in ℥iv.); dissolved cocaine mur. gr. x. in the water, then added this to the glycerine and zinc chlor.; the result is as No. 3 solution enclosed (clear). After getting the precipitate as you state in *C. & D.* of to-day's issue, the addition of acid. mur. q.s. made it clear, but precipitation again occurred; with the addition of more acid it was much too

strong of acid for use (as throat-spray). I then partly neutralised with sodii bicarb., with the result as seen in enclosed solution No. 1.; precipitate still present. With the addition of 1 part S.V.R. 60 per cent. to 7 parts solution No. 1 became quite clear, as in solution No. 2.

Yours sincerely,
W. J. W. (143/25.)

[This all shows the advantage of waiting a little before deciding upon a result. No. 1 solution has become as clear as the others.]

MISCELLANEOUS INQUIRIES.

We reply to our subscribers and their employes only; queries must, therefore, be authenticated by the name and address of the subscriber. When more than one query is sent write each on a separate piece

Notice to Querists.

of paper. When a sample accompanies a query full particulars regarding the origin and use of the sample must be given, and the name of the querist should be placed on the sample. Queries are not replied to by post.

139/65. *Aloin*.—Your sample of *Herring-preservative* "introduced from Germany," is boric acid.

138/10. *Borax*.—Why not try water? Borax does not become insoluble on fusion.

141/44. *A. S. F. E.*—Liquid for Transferring Pictures from Illustrated Papers to paper or other absorbent surface:—

Spt. vini rect.	...	...	...	5j.
Glycerini	...	...	...	5j.
Aqua	...	...	...	5j.

M. Add a little perfume.

Directions for Use: Place the picture right side up on smooth wood or glass, placing one layer of waste paper underneath. Damp the picture with the fluid by means of a camel-hair brush, then place unglazed paper upon the picture, and rub briskly and firmly from you with a paper-cutter or any other smooth hard surface.

140/46. *Synthetic*.—*Synthetic Perfumery* has not got the length of a book yet, but is dealt with in one which we shall publish shortly.

139/64. *Silver*.—We cannot attend to anonymous queries.

143/3. *Chemicus*.—(1) *Lime-juice Cordial*:—

Boric acid	...	...	...	1 oz.
Citric acid	...	...	...	2 oz.
Sugar	...	...	...	3 lbs.
Water	...	...	...	2 pints.

Dissolve by heat. When cold add—

Lime-juice	...	...	...	30 oz.
Tincture of lemon	...	...	...	2 oz.
Water to	...	...	...	1 gal.

Mix and colour with caramel.

(2) *Lemon Squash*:—

Citric acid	...	...	...	1 oz.
Sugar	...	...	...	2 lbs.
Water	...	...	...	24 oz.

Dissolve and add the following, previously mixed and filtered:—

Salicylic acid	...	...	...	5ss.
Oil of lemon	...	...	...	5ss.
Tincture of lemon	...	...	...	5j.
Tincture of turmeric	...	...	...	5ss.
Caramel	...	...	...	℥xx.

Mix.

135/25. *Almosute*.—(1) *Hair-dye*.—If No. 1 is a solution of nitrate of silver gr. xl. to 3j., No. 2 may be a solution of sulphurated potash 5j. to 3j. This is for a black eye. (2) We think you have not added quite enough ammonia in dissolving the bismuth precipitate; it requires a slight excess.

142/6. *W. D.*—(1) The best application for threatened. Bed-sores is equal parts of spirit of wine and dilute acetic acid. (2) When the skin breaks use zinc ointment.

(3) There is no reason why you should not make a *Syrup. Belladonnæ* from the extract for your customer:—

Ext. belladonnæ	...	...	...	gr. lxiv.
Aq. bullien.	...	...	...	5iv.

Rub in mortar, filter, make up to 4 oz. by washing the filter-paper with more water, and dissolve in the filtrate 8 oz. sugar. Make up, if necessary, to 8 fl. oz. 5j. will equal 1 gr. ext. belladonnæ.

A better syrup may be made with succus belladonnæ ℥v. to ℥x. to 5j. of syrup.

136/66. *rhymol*.—Your *Indigestion-pills* are approximately—

Pil. rhei co.	...	...	...	gr. xxiv.
Ext. coloc. co.	...	...	...	gr. xij.
Sodæ carb. exsicc.	...	...	...	gr. iij.
Ext. hyoscy.	...	...	...	gr. vj.
Ext. tarax.	...	...	...	gr. iij.

Ft. massa et div. in pil. xij.

One three times daily just after meals.

141/74. *Bristol*.—Poison would be best to get rid of the swarms of mice. Messrs. W. B. Fordham & Son (Limited), York Road, N., are better able to inform you in regard to mouse-traps than we are, as they keep all the best and latest notions in that line.

138/61. *Tasmania*.—The Powder for Dusting on Bad Leg is composed of—

Iodoform.	...	...	...	5j.
Ac. borici	...	...	...	3vj.

M.

141/25. *C. S. & Co.*—"Cheap, strong, lasting, and agreeable Sachets."—The following will give you an idea of the composition of these sachets. They can, of course, be cheapened by addition of some odourless diluent:—

Rose.

Santal-wood	...	...	...	1 lb.
Rose-leaves	...	...	...	1 lb.
Oil of rose-geranium	...	...	...	½ oz.

Violet.

Orris-root	...	...	...	1 lb.
Benzoin	...	...	...	4 oz.
Rose-leaves	...	...	...	½ lb.
Oil of neroli	...	...	...	5j.
Oil of almonds	...	...	...	5j.
Oil of verberna	...	...	...	℥x.

Lavender.

Benzoin	...	...	...	½ lb.
Lavender-flowers	...	...	...	2 lbs.
Oil of lavender	...	...	...	½ oz.
Oil of rose-geranium	...	...	...	5j.

Verbena.

Lemon-peel	...	...	...	1 lb.
Orange-peel	...	...	...	1 lb.
Caraway-seeds	...	...	...	½ lb.
Oil of bergamot	...	...	...	5ss.
Oil of lemon	...	...	...	5ss.
Oil of verberna	...	...	...	5j.

The synthetic perfumes are now also used, being mixed with ground rice in the proportion of gr. ss. to gr. j. to the ounce.

137/49. *D. & S.*—Your *Eczema-cream* has a composition similar to this:—

Lanolini	...	...	...	5ij.
Vaselin. alb.	...	...	...	5ij.
Zinci oxid.	...	...	...	5ss.
Ac. borici	...	...	...	5ss.

Thin with a little heavy petroleum oil if not thin enough.

142/5. *W. T. J.*—Combined Lamp and Lubricating Oil for bicycles:—

Sperm oil	...	...	...	5x.
Heavy petroleum oil	...	...	...	5v.

Mix.

141/10. *T. T.*—Beyond saying that *Marking-ink* pencils are largely composed of nigraniline (aniline-black) we can-

not help you. Formerly a paste of silver tartrate was used as the "lead." For aniline marking-ink see *C. & D.*, March 28, 1896.

142/20. *G. W. & Son.*—Artificial Musk for scenting soap-powder:—Put 5j. ol. suecini in a mortar, and add to it drop by drop 5iiss. ac. nitric.; let stand twenty-four hours, then separate and wash the resinous matter, and dissolve in a mixture of 3vj. spt. vini rect., and 5ij. spt. æther. nit. A solution of musc Baur is much truer and stronger.

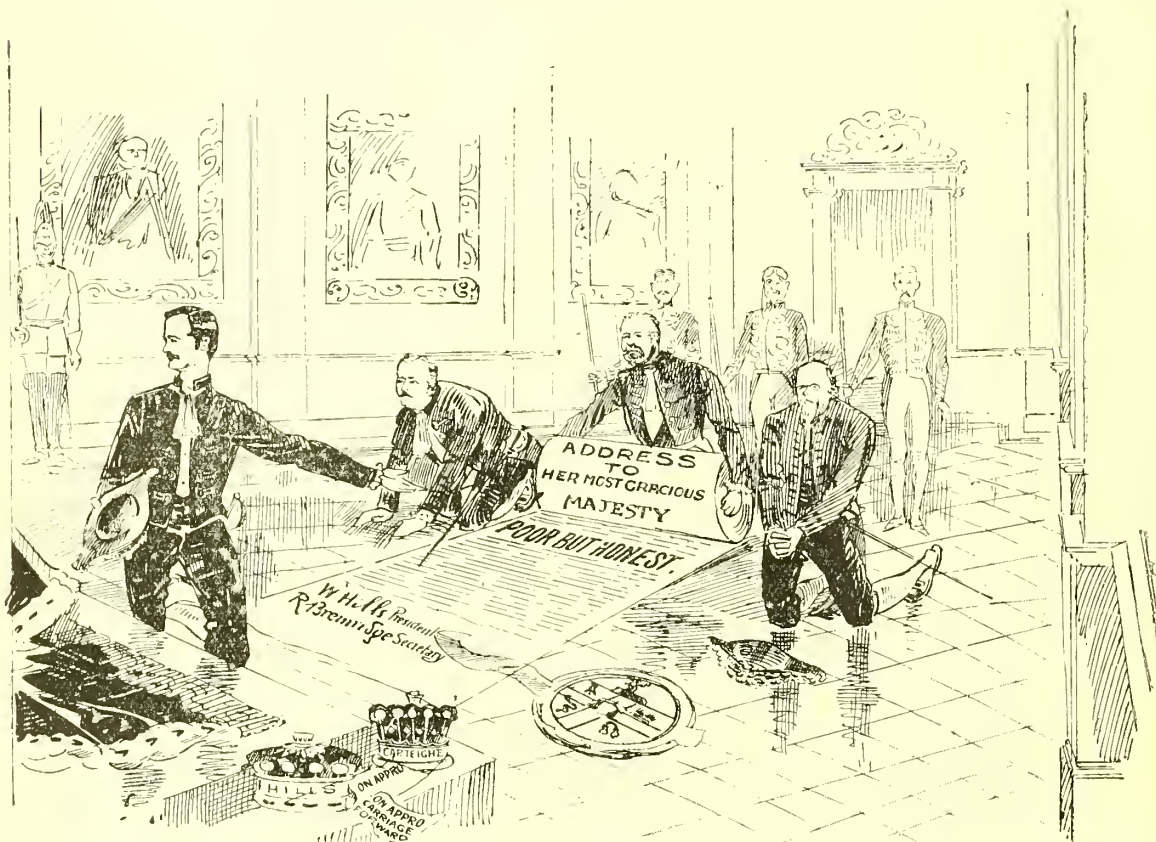
139.34. *H. H. C.*—Powder for Gapes in Chicken.—We can only find camphor and prepared chalk in your sample (in the proportion of 20 gr. of camphor to 1 oz. of chalk). As you say it has proved very effectual we repeat the instruc-

tions. The chickens are shut up in a coop which is closed as much as possible, two tablespoonfuls of the powder is then blown in and allowed to act for fifteen minutes.

142/55. *Alpha.*—A strong arsenical solution makes without doubt the best weed-killer. Perhaps you do not use a strong enough solution. Other things used are salt, quicklime, and a solution made by boiling together sulphur and lime.

143/63. *Anxious* inquires if, in our opinion, 20 gr. ammon. chlor. would have the effect of immediately sobering a drunken person. The best thing we know of is 5ij. liq. ammon. acet., freshly made, and taken whilst effervesceing.

A Jubilee Address: in Lighter Vein.



On bended knee to your Majesty,
Audience we humbly crave,
To expound, great Queen, how true we have been,
How loyal, and just, and brave.
We venture to claim that the well-won fame
Of your Majesty's Record Reign
Has in *partibus* been swelled by us
From the days of Allen and Payne.

But we groan on the rack with a woeful lack
Of the coin of your glorious realm;
So we humbly pray that the By-laws may
Be swiftly passed; and tell 'em—
Your Lords of the Privy Council Board—
If they'll but rush them through,
We'll be quite set up, and will ask no more—
At least, for a year or two.

And those there be who scoff and flout,
And think of our wisdom naught,
Who mock at our talk, and the way we walk,
And in none of our nets are caught;

For the P.A.T.A., in strong array,
Waged with us a cruel war,
And with pleas *ex parte* our gallant Carteighe
Attacked in a circular.

And some won't assent to our good intent,
When we fresh schemes propound;
And they want to know *why* the ceaseless flow?
And *wherefore* should more be found?
Such awkward things they seek to learn,
'Tis time their death-knell clanged;
So we hope by your grace that they soon shall be:
Most safely and surely hanged.

And when, with your lavish, bounteous hand,
You the "Honours" broadcast spread,
Pray do not o'erlook, in the peerage-book,
Or under the "Knighthood" head,
The claims of those who the pestle wield,
And we ask you humbly but hearty
To make Mr. Hills our Baron of Pills,
And create M.C. Earl Carteighe.—W. C.

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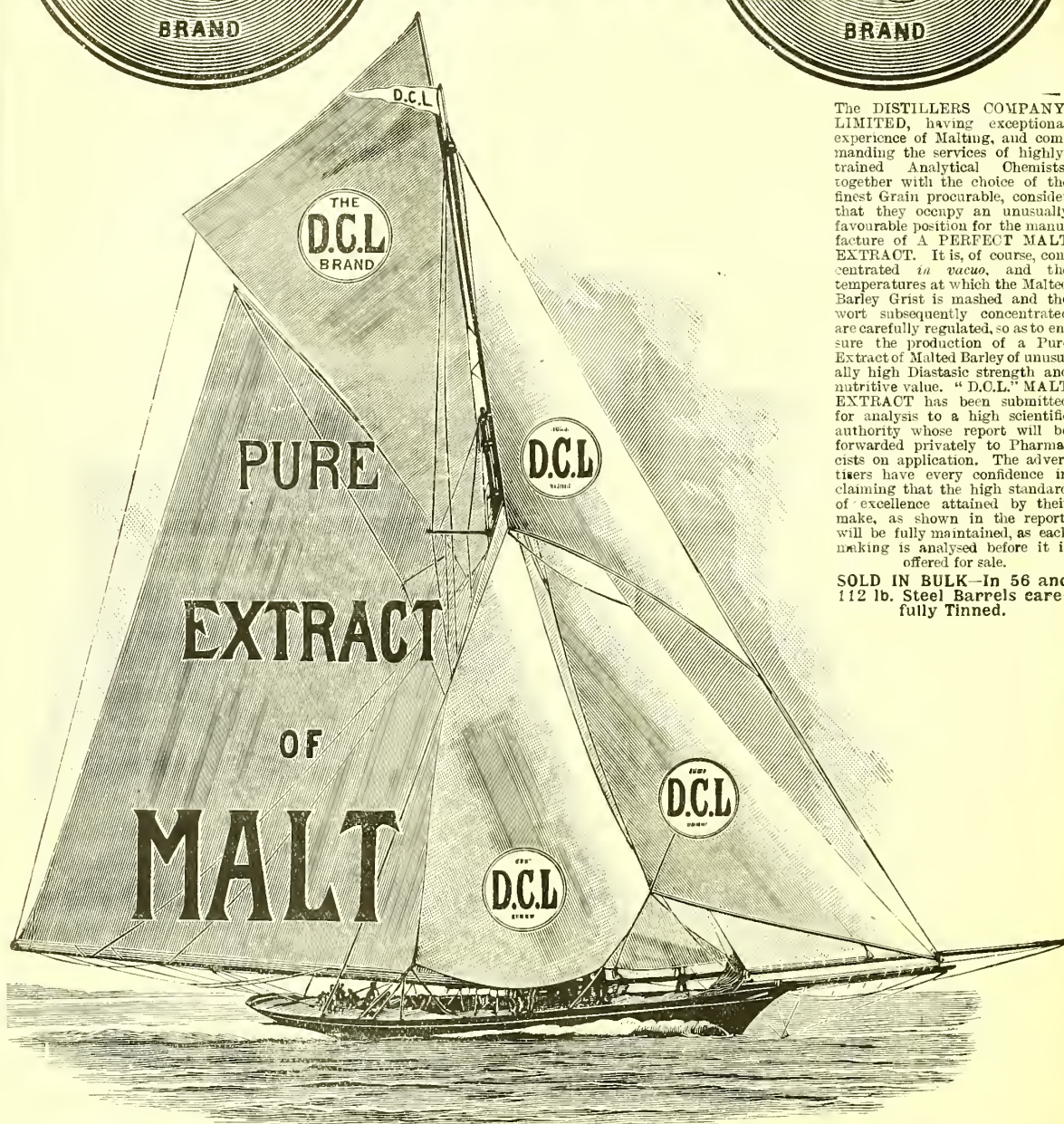
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PURE AND CHEAP.

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Chloride of Sodium035
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Insoluble	nil

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"A bright idea."
Heliotrope, Jasmine, Lily of the Valley, Lavender,
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In 1-lb. bottles, elegantly labelled, or put up in
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Samples and price on application.

THE LATEST NOVELTY IN SULPHUR TABLETS: Yellow and Pink Sulphur Trochettes.

"A decided hit."
The colouring matter used is quite harmless.
Write for free samples.

MAGNES. CIT.

We manufacture four qualities of this—viz.,
A, B, C, and D.
In bulk, or in 1-lb., $\frac{1}{2}$ -lb., and $\frac{1}{4}$ -lb. round bottles,
corked.
Also in blue flats, lettered, patent stoppered or
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Also flavoured and tinted—Raspberry, Lemon, or
Lime Fruit.

"MALTO PETROLEO."

This preparation consists of the purest Extract of
Malt, combined with 33 per cent. of purified Petro-
leum Oil.
Purified Petroleum is a most agreeable and effective
substitute for Cod Liver Oil, largely prescribed by the
most eminent physicians, and its chief advantage is
that it is almost without taste or smell, is readily
assimilated and taken with avidity by Ladies and
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Put up in 1-lb. bottles.
Samples and price on application.

PEARL-COATED DOG PILLS in boxes.

One of the most saleable lines introduced
In boxes containing 1 doz. 3*l.*, or 6*d.* packets.
Particulars on application.

BIRD and POULTRY PILLS in boxes.

A similar line to our Dog Pills.
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COMPRESSED TABLETS of pure drugs.

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In bulk or put up in bottles for retail sale, and with
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List on application.

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The most effective Cough Lozenge yet introduced.
Especially useful in obstinate and long-standing
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The Label has been passed by the authorities of
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In tins to retail at 6*d.* and 1*s.* Samples free.

EFFERVESCING FRUIT SALINE or Salt of Health.

In bulk or put up in 6-oz or 8-oz. Patent stoppered
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Fruit saline, flavoured and tinted—Raspberry, Lemon,
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THE NEW FRUIT SALINE GRAINS.

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A splendid combination of the new Fruit Saline
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A perfect substitute for Iodoform, odourless, and non-toxic. *Special indications:* Ulcers Mollis, Papul. Madid., &c.

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ANTISEPTIC DISINFECTANT & DEODORANT

Chinosol ($C_6H_4N_2KSO_3$) is, as shown by the Bacteriological Reports, at least 40 times stronger in its germicidal action than Carbolic Acid, without possessing the dangerous and otherwise objectionable properties of the latter.

Chinosol is sold in various forms adapted to its manifold important applications—viz., Pure Chinosol, in Powder and Compressed Tablets; Crude Chinosol, in Granular and Fluid form, as a Disinfectant and Deodorant; Dusting Powder, for Wounds, Sores, and for Destruction of Parasites, &c.; Chinosol Lanolin Ointment; Chinosol Antiseptic Surgical Dressings; Chinosol Soap (Medicinal, Veterinary, and Toilet), &c., &c.

A special and very saleable Counter line, for Retail, is provided in a box (as per facsimile), containing Chinosol Tablets, sufficient to make, by simply dissolving in cold water, 2 gallons of a strong Deodorant, or 10 gallons of an efficient Disinfectant.

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Dose—1 to 2 drachms diluted.

Packed for Dispensing only, in 10-oz., 22-oz., 40-oz., and 90-oz. bottles.

CAUTION.—The uniform success which has attended the administration of this remedy during the last twenty years has caused a host of worthless imitations to be offered to the Medical Profession. These imitations, whilst closely copying the title, utterly fail to approach the original preparation in quality, and only give cause to disappointment and failure.

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Owing to misapprehensions as to the amount of morphine used in the preparation of

Mrs. WINSLOW'S SOOTHING SYRUP,

we wish to state that the amount is one-eighth ($1/8$) of one grain to a fluid ounce. As there are eight teaspoonfuls to an ounce, the amount of morphine in a teaspoonful, our maximum dose, is one sixty-fourth ($1/64$) of a grain.

It will be seen that this is very much less than the quantity used in other preparations authorised by the Pharmacopœia.

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IN £5 LOTS.

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BEECHAM'S PILLS.—	9½d. size (36 pills)	7/-	per dozen, net.
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	2/9 „ (168 pills)	25/-	„ „

No orders executed below £5 value. These prices are the lowest, no matter what quantity is ordered.

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Packages free. Carriage paid.

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THE LINCOLN & MIDLAND COUNTIES DRUG CO., LINCOLN, ENGLAND.

DR. SCOTT'S BILIOUS & LIVER PILLS.

The Proprietors of the above well-known Pills have decided in the interest of the Retail trade to stop all further cutting and allow a reasonable profit, and in so doing hope to secure the goodwill and co-operation of all respectable Chemists and Druggists.

A GOOD PILL and GOOD PROFIT.

1/1½ size	...	...	...	Wholesale Price, 10/- per dozen.
" "	...	...	...	Minimum Retail Price, 1/- „ box.
2/9 „	...	...	...	Wholesale Price, 24/- „ dozen.
" "	...	...	...	Minimum Retail Price, 2/6 „ box.

The proprietors will be obliged if Chemists will report all cases of Cutting to

THE SECRETARY, PROPRIETARY ARTICLES TRADE ASSOCIATION,
2 and 3 STONECUTTER STREET, E.C.,

who will see that the Cutting is stopped or supplies withheld.

Messrs. LAMBERT & CO. will be pleased to supply Handbills, with Name and Address, CARRIAGE PAID, on receipt of Business Card direct to
173 Seymour Place, London, W.

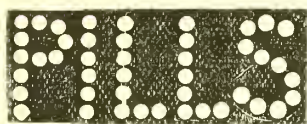
Never Excelled !!! Quality the Strong Point.

WAND'S SOLUBLE PEARL-COATED PILLS.

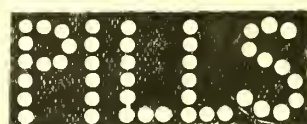
RELIABLE Pills, Pearl-Coated, any **Colour** or **Silvered**, are **WAND'S** Speciality. Colonial, Foreign, and Home **Trade GROWING**. For months past we have been reluctantly refusing orders. This inrush of new trade compelled the Building of a **New Factory**, fitted with **New Engine** and **Newest Appliances**, equal in output to many tons of Pills per year. We are now in full working order, and solicit your favours, assuring you that Quality is our Strong Point and First Thought.

Ingredients are the Best.

Strength the Highest. Price Lowest,
Quality of Drugs considered.



WAND, ^{PILL} FACTORY, LEICESTER,
ENGLAND.



MAGNESIA

CARBONATE, CALCINED, AND HYDRATE.

THE WASHINGTON CHEMICAL CO., LIM., WASHINGTON, COUNTY DURHAM, ENGLAND.

LONDON AGENTS—MESSRS. CLIFFORD CHRISTOPHERSON & CO., 17 Great Tower Street, London, E.C.

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"RELISH" LEEDS.

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TELEPHONE
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GOODALL BACKHOUSE AND COMPANY
7 TO 15 WHITEHORSE ST
SOVEREIGN ST & VICTORIA ROAD
LEEDS.

MANUFACTURING CHEMISTS & WHOLESALE DRUGGISTS,
DRUG & SPICE GRINDERS,

Patent Medicine Dealers, Druggists' Sundriesmen,

TIN CANISTER MAKERS.

PROPRIETORS OF
YORKSHIRE RELISH & GOODALL'S HOUSEHOLD SPECIALITIES.

PRICE LISTS OF DRUGS, PATENT MEDICINES, AND PACKED GOODS ON APPLICATION.

Net Cash Prices Quoted for Wholesale Quantities. Inquiries Solicited.

Mitchell's CASTOR OIL

The *Lancet* of 8th June, 1895, says:—"MITCHELL'S PROCESS of extracting and refining Castor Oil is obviously an improvement which the profession cannot fail to approve and welcome, since in removing the great objection to the Oil—namely, that of repulsive taste, as well as in securing its full therapeutic effect—it is calculated to assist and to facilitate the administration of a very valuable therapeutic agent."



The *British Medical Journal* of 18th May, 1896, says:—"Castor Seeds have, unless very old, a pleasant nutty flavour, and the disagreeable taste of ordinary Castor Oil has been produced by the conjoint action of moisture, air, heat, and fermentative changes during the expression of the Oil from the Seeds and its subsequent treatment. An Oil can be obtained as pleasant to the taste as the fresh seed, if the expression is not assisted by artificial heat, and the Oil at once freed from impurities by filtration without heat, in vessels from which air is excluded, and bottled *in vacuo*. . . . By MITCHELL'S GOLD PROCESS . . . the Oil thus obtained has a simple bland taste, resembling olive oil, the nauseous taste associated with the ordinary Cold Drawn Castor Oil being entirely absent."

The *Hospital* of 8th June, 1895, says:—"We have tested the samples sent us both clinically and chemically, and the results are excellent. . . . We have never yet met with an Oil that had not this taste till we tried Mitchell's. . . . We consider this Oil the very best we have met with, and can cordially recommend its use to the profession."

Put up in 2, 4, & 8 oz. bottles, to be retailed at 6d., 9d., & 1s.

Also supplied in
WINCHESTERS at low prices, which will be forwarded on application.

FOR PARTICULARS AS TO DISCOUNTS, &c., APPLY
THE UNITED BRITISH CASTOR OIL CO., LTD.
OSSORY ROAD, LONDON, S.E.

READ THE FOLLOWING LETTERS They Speak for Themselves.

_____, Newcastle, March 8, 1897.
GENTLEMEN,—I notice your Ad. in the *C. & D.* for Saturday last. Please send me a copy of your Price-list, &c. With reference to your offer regarding the saving you can give the trade, if your list is satisfactory I will give you an opportunity of verifying the same.

Yours truly,

_____, Newcastle, March 11, 1897.
GENTLEMEN,—Your Price-list and Samples to hand. I must honestly confess your prices are really an eye-opener; if the goods are as satisfactory in quality as in price, I shall be pleased to do a good trade with you. Please send on the enclosed trial order at your earliest convenience, and oblige,

Yours truly,

_____, Newcastle, March 27, 1897.
GENTLEMEN,—I reply to yours. I have pleasure in stating that I am perfectly satisfied with the goods I have received; the quality is quite equal to what I have previously had (and I have always been particular in buying the best of everything), and you are quite within bounds in stating that your prices are from 25% to 50% below the usual charges. If you continue to give the same satisfaction, I shall give you my entire trade in the lines you carry, which, though perhaps not a very big item with the retail chemist, your offer to pay carriage on small lots makes it worth any chemist's while to remember you for these goods. Nowadays, when there is so much competition to meet one must watch the buying end closely, as you state in your Ad.

I am, Gentlemen, yours truly,

**This is the Grist of over 100 Letters
we have lately received.**

Send your Name and Address, and we will put you
in a position to say the same.

BROOK, PARKER & CO., WHOLESALE
DRUGGISTS,
BRADFORD.

IODINE - VALSÖL OIL

(Supersedes the Tincture of Iodine).

1%, 6%, and 10% Solution of Iodine in oxygenated
Petroleum (*Vaselinum oxygenatum*, Klever).

**DOES NOT BLISTER NOR STAIN THE SKIN, IS
READILY ABSORBED,**

Which has been proved by urine analysis.

IODOFORM - VALSÖL,

1½% and 3% clear solution of Iodoform in oxygenated
Petroleum, forms an **EMULSION** with liquids such as
the normal and pathological secretions of the skin, mucous
and serous membranes, glands, tissues, sores, &c., and is
absorbed with a facility unknown before.

Also Creasote-Valsöl, 5% and 20%; Ichthyol-Valsöl, 10%;
Menthol-Valsöl, 25%; Creolin-Valsöl, 5% and 15%;
Hydrarg. Kal. Jodat. Valsöl, 2½%, form **EMULSIONS**,
and are perfectly absorbed.

VALSOLUM PURUM SPISSUM,

Most perfect aseptic ointment base; soluble in water
80° C.; Hydrargyrum Valsöl, 33½ and 50%, easily absorbed.

WILLIAM POPPELREUTER,
54 Portland Street, Manchester.

BRANCH: 19 ST. DUNSTAN'S HILL, LONDON, E.C.

FORMALDEHYDE.

Original Make.

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TREVELYAN BUILDINGS,

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SPONGE IMPORTERS.

M. PETERSON & CO.

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FOR HOME FOREIGN, & COLONIAL MARKET.

SCOTTISH ACID & ALKALI CO.

(LIMITED).

Mr. R. H. STEEDMAN, Managing Director.

MANUFACTURERS OF

RESUBLIMED IODINE,

**PURE IODIDES of POTASSIUM & SODIUM,
IODOFORM,**

Commercial Sulphuric Acid.

Registered Office—82 W. REGENT STREET. GLASGOW.

Works—Longford Chemical Works, KILWINNING,

AYRSHIRE.

Sole Agents—KIRKPATRICK, BARR & GUTHRIE, 4 Cullum
Street, LONDON, E.C.

Special Quotations on application.

BUYERS' GUIDE.

See pages 17-19.

NEPENTHE.

THE SAFEST AND BEST PREPARATION OF OPIUM.

PRODUCES NEITHER HEADACHE, SICKNESS, NOR CONSTIPATION.

PREPARED EXCLUSIVELY FROM OPIUM.

Although many new hypnotics and analgesics have been recently introduced, NEPENTHE still holds its position as THE hypnotic and analgesic of excellence. "Nepenthe" is registered under the Trade Marks Act, and is our sole property. No other preparation should be substituted when Nepenthe is ordered in a prescription.

See also in bottles bearing a label in white letters upon a green ground. We prepare also Double Strength Nepenthe, and Glycerols of Nepenthe (eight times the single strength) for hypodermic injection.

PRICES AND TERMS ON APPLICATION.

FERRIS & CO., WHOLESALE AND EXPORT DRUGGISTS. **BRISTOL.**

BARRON, HARVEYS & CO.

WHOLESALE AND EXPORT DRUGGISTS,

GILTSPUR STREET, LONDON, E.C.

Beg to inform their friends and the Trade generally that, being Sole Proprietors of the Business of

BARRON, SQUIRE & CO., BUSH LANE,

and also the various Formulæ of the Special Preparations of

JAMES BASS & SONS, HATTON GARDEN,

they are prepared to execute orders for the same, and pledge themselves to supply them in all their integrity.

SPECIMENS OF THESE PREPARATIONS have REMAINED in the MUSEUM of KEW GARDENS during 28 YEARS
WITHOUT DETERIORATION.

**"SWEET" PEARL COATED PILLS.
TINCTURES, ETC., IN BOND.**

LEO'S COMPRESSED DRUGS

Ammon. Brom.

Ammon. Chlor.

Antifebrin.

Antipyrin

Bismuth Subnit.

Chloralamid

Ipecac. Powd.

Ipecac. & Opium

Pepsine, B.P.

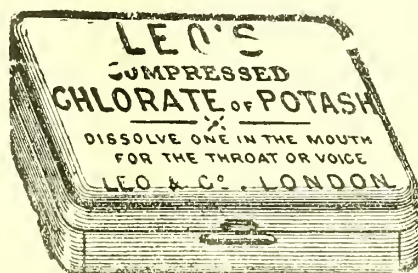
Phenacetin

Potass. Bicarb.

Potass. Brom.

Maintain their high reputation against all comers for general excellence of quality and finish.

When
ordering
specify
LEO'S.



They are
supplied by
all the
Wholesale
Houses

Potass. Iodide

Quinine

Salol

Salicin

Soda Bicarb.

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Soda Salicylate

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Sulphur Compound

Urethane

Voices (Potass. Chlor.,
Borax and Cocaine)

COMPRESSED CHLORATE of POTASH.
CHLORATE OF POTASH & BORAX.

Quotations given for large and small quantities.

LEO & CO., 16 CREECHURCH LANE, LONDON, E.C.

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Telegrams—"PHARSALIA."

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NEW CATALOGUE, NOW READY, WILL BE SENT POST FREE ON RECEIPT OF BUSINESS CARD.



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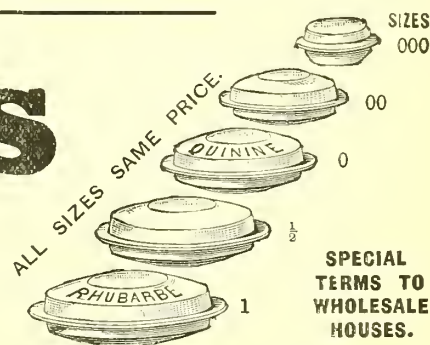
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(CAPELLIFORMES.)

Plain White, per 1,000	3s. 3d.
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Customer's Name and Address printed free (in orders of 5,000 assorted, or 6d. per 1,000 extra on orders for 1,000 of a size. Name of Customer embossed free, but cost of die according to wording charged for from 2s. 6d. each size.)

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WHOLESALE
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WHOLESALE DRUGGISTS
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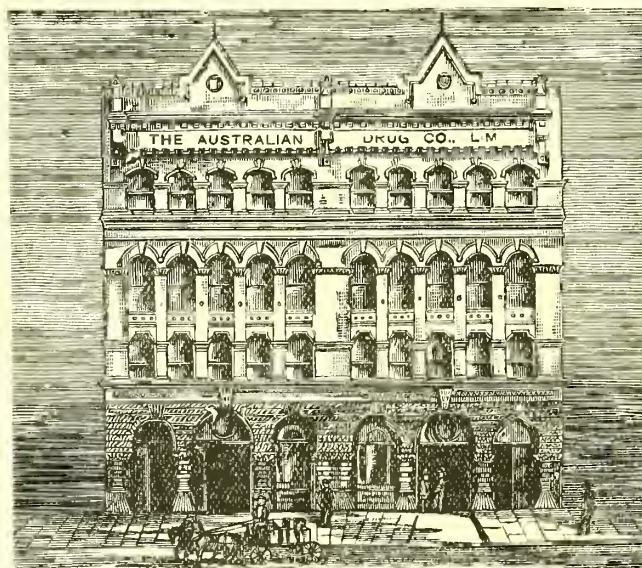
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LATE E. PROSSER & CO.,

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SUNDRIES, DYE GOODS,

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Wholesale Druggists, Manufacturing Chemists, and Druggists' Sundriesmen,
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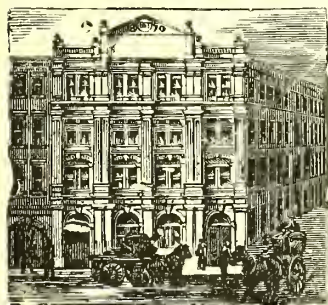
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 Agencies solicited from firms who are prepared to actively introduce their Manu-
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 relating to Medicine and Surgery.

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(Chemists in Ordinary to H.E. the Governor of Madras),

OOTACAMUND.

POTASS. CYANIDE

(From 30 % to 98 %),

YELLOW PRUSSIAN OF POTASH,

Nitrate of Silver, Chloride of Gold,

AND OTHER

CHEMICALS

FOR PHARMACEUTICAL, PHOTOGRAPHIC, AND
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GUARANTEED PURE, YELLOW AND WHITE.

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LARGEST MAKERS IN THE KINGDOM.

We are prepared to supply METHYLATED SPIRIT in
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REDUCTIONS TO LARGE BUYERS.
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FINEST ORANGE WINE FOR QUININE.

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Who supply Chemists with any of the following preparations packed in their own name:—

Arsenical Powder Dip; Arsenical Paste Dip; Non-Pols. Paste Dip and Fluid Dip; Horse and Cattle Washes; Paste and Fluid; Maggot Lotion; Mange Liniment; Dog Soap; Carbolic Powder; Carbolic Acid; Carbolic Soft Soap.

DISINFECTANTS, BOTH POWDERS AND FLUIDS, IN BULK.

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ESTABLISHED 1860.

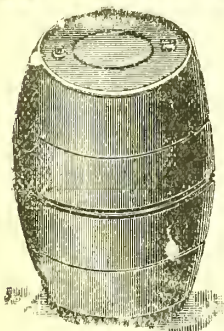
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NO COOPERAGE, NO LEAKAGE, NO LOSS BY EVAPORATION.

For Carrying and Storing
Chemicals, Spirits, Acids, Varnishes, Oils,
and Other Liquids.

ALSO

White Lead, Paints, Resin, Gums,
Wax, Soft Soap, and other Dry or Semi-
Liquid Goods.



Are less Dangerous than
Wood Barrels.

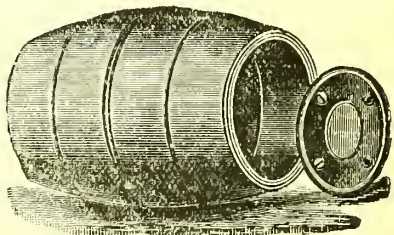
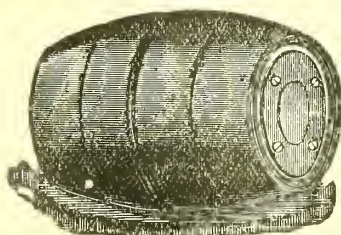


Occupy Less Space,
are Stronger
and more Durable
than Wood Barrels.

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SOLE MANUFACTURERS,
IRON & STEEL PLANT CO.
LIMITED,
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LONDON, E.C.

WORKS—Barrow-in-Furness.



THE LATEST SENSATION IS

*Sen-Sen.*BEST SELLING CACHOU IN THE WORLD.

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6/- { *Per Box of—*
40 3d. Pkts., and
40 Free Samples.

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Order a Box from your Wholesale House.
If they have not stocked it, send us P.O. for
6/-, and we will send you a Box, carriage
paid.

OUR price is 6s. PAY NO MORE.

SEN=SEN COMPANY,

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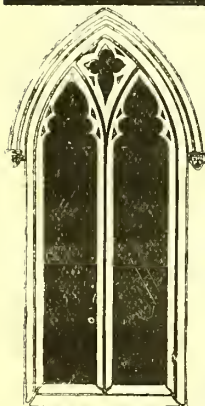
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MEDICINES



157,810.

DR. BOW'S LINIMENT.

Of late a spurious article has been offered for sale, put up in imitation of the genuine one even to copying the Pamphlet, Wrapper, and Labels. To protect the public from, and facilitate proceedings against, such frauds, the Proprietor has registered the Trade Mark here shown, a reduced copy of which will be found on the outside label on every bottle put up after this date. As a further security, the name "DR. BOW'S LINIMENT" (also a Trade Mark) appears in the Government Stamp.

BARCLAY & SONS, LIMITED, LONDON
RAIMES, CLARK & CO., EDINBURGH & YORK

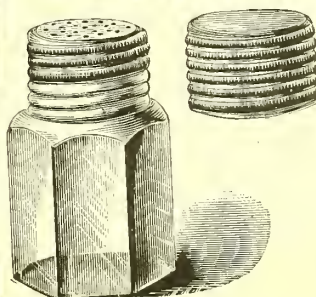
For the Proprietor,
December 1st, 1891.

SUPPORT HOME INDUSTRIES.

BUY
KENT'S
BRUSHES.

See pp. 209-12, Summer Issue; also Diary, 1897
pp. 160, 161, 162, 163.

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FOR
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Foot Powder,
Boot Powder, &c.
Price from 2/6 per doz.

E. BENTLEY & SON,
Bath Street,
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Dr. A. B. GRIFFITHS says, "Second to none in the market."—Aug. 24, 1896.

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Also S.V.R. & S.V.M.
At Lowest Prices.

ESCHMANN BROS. & WALSH.

Inventors and Manufacturers of the

SOFT SILK FLEXIBLE CATHETER, GUARANTEED WITH WOVEN EYES.

To be had of all Surgical
Instrument Makers
and Wholesale Houses.



To be had of all Surgical
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THE NORTH LONDON GLASS BOTTLE COMPANY

(I. ISAACS & CO., Proprietors)

Beg to inform the Trade that they have made a further reduction in the price of their Bottles, as follows:—
The NEW SHAPE FLAT BOTTLES, with rounded edges, plain or graduated—

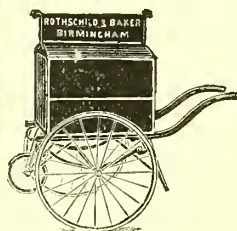
3 & 4 oz. ..	7/6 per gross.	10 & 12 oz. ..	12/- per gross.
6 " 8 " ..	8/6 " "	16 " ..	16/- " "
WHITE MOULDED PHIALS, plain or graduated Teaspoons—			
1/2 oz. ..	3/6 per gross.	1 1/2 oz. ..	4/6 per gross.
" " ..	3/9 " "	2 " ..	5/- " "

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Six gross and upwards, assorted or otherwise, are carriage paid to any address in England; smaller quantities not carriage paid.

I. ISAACS & CO., Glass Bottle Manufacturers,
106 MIDLAND ROAD, ST. PANCAS, LONDON.
Established 50 years. Bankers—London and Westminster Bank.

INCREASE YOUR BUSINESS



By using a smart Parcel Cart to deliver your goods you advertise in the cheapest and most effective manner, and therefore increase your sales.

LIGHT DELIVERY CARTS as drawn.
SPECIALLY CONSTRUCTED FOR
CHEMISTS,

From 65/-

ROTHSCHILD & BAKER,

PARCEL CART & INVALID CARRIAGE MAKERS,
Summer Row, BIRMINGHAM.

CATALOGUE FREE on application.

Profitable Extras for Chemists.

TOBACCO, CIGARS, CIGARETTES.

AND TOBACCONISTS' FANCY GOODS.

All Packet Tobaccos, Cigarettes, and other Tobacconists' Proprietary goods supplied at Manufacturers' own List Prices
Every Smoker's Requisite and all Novelties—Up to Date—in one order.

MINIMUM OF TROUBLE—MAXIMUM OF PROFIT.

SEND FOR ILLUSTRATED PRICE LIST (200 PAGES), POST FREE.

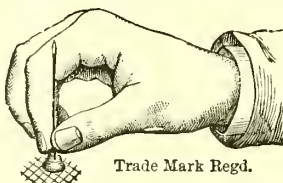
SINGLETON & COLE, BIRMINGHAM

THE ASSOCIATION FOR THE SUPPLY OF PURE VACCINE LYMPH

(ESTABLISHED 1877).

12 PALL MALL EAST,
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Telegraphic Address—

"DARQUE LONDON."

Office Hours—

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All Antiseptic Precautions most carefully observed.

PIN-POINTS GRATIS WITH VACCINE WHEN REQUESTED.

CALF, Tubes, 2/-; Half-Tube, or two S.V. tubes, 1/-.

POMADE, especially active, for Export, 5/-, 10/-, 20/- each.

HUMAN, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1/8 each; one-third full, 1/- each. Tubes, two-thirds full (in every respect equal to those mentioned above, but without source), in quantities for export, £5 per 100.

Sole Agents for DR. WARLOMONT'S CALF VACCINE. For price see Calf Vaccine above.

P.O.O. (including postage, and crossed London and Westminster Bank), with orders payable to EDWARD DARKE, Sec.

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MELYN TIN WORKS, NEATH.

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DECORATED & CRYSTALLIZED TINPLATES

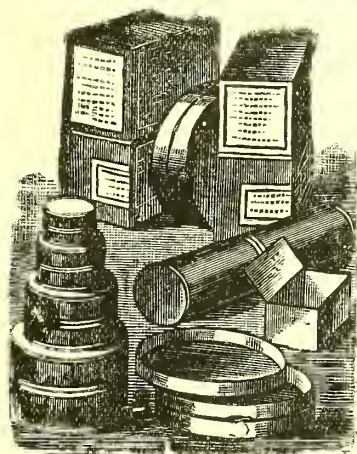
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SEAMLESS DECORATED TIN BOXES

FOR POLISHING PASTE &c

HIGHEST AWARDS
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AUSTIN & CO.

Patentees and Manufacturers of FANCY CARD

ROUND, OVAL, & SQUARE SHAPED BOXES

FOR POSTAL AND GENERAL PURPOSES.

ALSO PATENT BARREL PACKAGES, WITH METAL ENDS, FOR DRY GOODS,
AND
Makers of best class of Violet Powder Boxes, and high-class goods of every description for Perfumery, &c.

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STEAM WORKS, 2 PRINTER'S BUILDINGS.

BOXES

ESTABLISHED 1839

ROUND, OVAL, SQUARE, or FOLDING, for the
DRUG, DRYSALTERY, AND CONFECTIONERY TRADES.

LABELS, WHEN PRINTED TO OUR INSTRUCTIONS, WE PUT ON PILL
AND OTHER BOXES FREE OF CHARGE.

BOXES AND CASES FOR

Making Powder, Black Lead, Bottles, Camphor Ball, Capsules, Castor Oil, Cough Lozenges, Dispensing Powder, Eye Ointment, Fancy Boxes, Fuller's Earth, Folding Boxes, Glass Top Outers, Homoeopathic Bottles, Insect Powders, Ink Cases, Jewellery, Lozenge, Lip Salve, Magnesia, Metal Paste, Marking Ink, Nipple Shields, Night Lights, Parcel Post, Pastilles, Pills, Potash Tablets, Plasters, Salt Lemon, Seldlitz Powder, Starch Gloss, Soaps, Soda Powder, Syringes, Tapers, Tooth Powder, Violet Powder, &c.

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A PROFITABLE LINE!! EASILY HANDLED!! Telephone No. 72, Dalston.

HEARN'S GLASS ILLUMINATION LAMPS

(NEW REGISTERED DESIGNS)

Will be greatly in demand on the occasion of

HER MAJESTY'S DIAMOND JUBILEE.

Grape Pattern.

MADE IN ENGLAND.

For Illuminating Private Residences, Public Buildings, Gardens, Fetes, Conservatories, Lakes, Hotel Gardens, Shop Fronts, Bazaars, Yachts, &c.

The lamps are packed in Cases of 12, 24, 36, 50, and 100, each Case containing an assortment of colours and patterns, and a corresponding number of lights.



Queen's Head Pattern.

MADE IN ENGLAND.

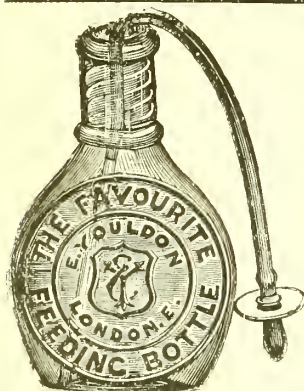
The Lamps are wired ready for hanging, and are made in the following colours:—Amber, Dark Blue, Dark Green, Puce, Venetian, White, Ruby-Stained, &c.

A very Handsome Show-Card is presented with opening Order.



Tulip Pattern.

For full particulars as to Prices, Terms, &c., apply to S. MAW, SON & THOMPSON, Aldersgate St.; F. NEWBURY & SONS, King Edward St.; BARCLAY & SONS (LIM.), Farringdon St.; and all the principal Wholesale Houses.



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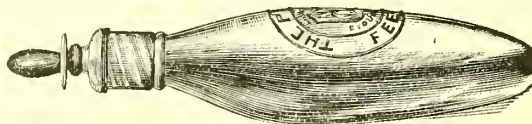
OF THE BEST MANUFACTURE.

PRICES REDUCED.

These are fitted with BEST QUALITY RUBBER ONLY, and are thoroughly Reliable.

TRY THEM. THEY SELL WELL.

A Trial Order Solicited.



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WILLIAM TOOGOOD.

TOOGOOD'S IMPROVED PATENT EARTHENWARE COVERED POTS

Are claimed to be the most Perfect and Convenient yet offered to the Trade.

ORDINARY THICKNESS—

1 dr.	2 dr.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.
1/6	1/6	1/6	1/8	1/10	2/-	2/3	2/10	3/6	4/6	5/6 per doz.

THIN FOR DISPENSING—

$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.
1/7	1/9	2/-	2/2	2/5	3/-	4/-	5/-	6/- per doz.

STAINER'S CHLORIDE OF AMMONIUM INHALING PIPE.

REGISTERED No. 250397.

The Cheapest and most Portable in the Market. 27/- dozen.

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A thoroughly practical Apparatus. 6/- each.

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FOR



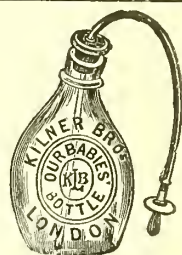
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OCTAGON, AND ROUND.
BEST AND ORDINARY QUALITY.
ALL SIZES AND GRADUATIONS.

FEEDING.

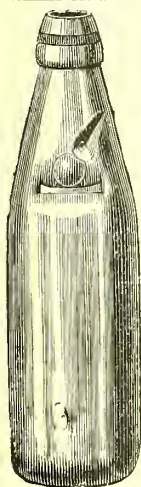
IN WHITE AND GREEN GLASS, WITH GLASS SCREW AND
OTHER STOPPERS, AND WHITE, BLACK, OR BROWN
RUBBER FITTINGS.

Buyers' Name put on Bottles free for certain quantities.



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CODD'S AND OTHER
STOPPERED BOTTLES.
ALL SIZES.
EXCELLENT QUALITY.



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CORK BOTTLES IN ALL
SHAPES
AND SIZES.
PRICES MODERATE.

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IN RUBBER COMBINATION.

7½ by 5 Inches. In Boxes of 2 dozen.

BELLADONNA, on Scarlet Felt	Special Quality.	... per dozen	4/-
BELLADONNA, on Cotton Cloth		... "	3/6
BELLADONNA with CAPSICUM, on Cotton Cloth		... "	3/6
BELLADONNA with OPIUM " "		... "	3/6
BELLADONNA, on Red Canton Flannel	...	...	2/6
BELLADONNA, on Cotton Cloth	...	...	2/-
CAPSICUM " "	...	...	2/-
STRENGTHENING " "	...	...	2/-
STRENGTHENING, on Red Canton Flannel	...	...	2/-
STRENGTHENING, on Scarlet Felt	3/-

Other sizes (12 by 7, 9 by 6, &c.) at proportionate prices.

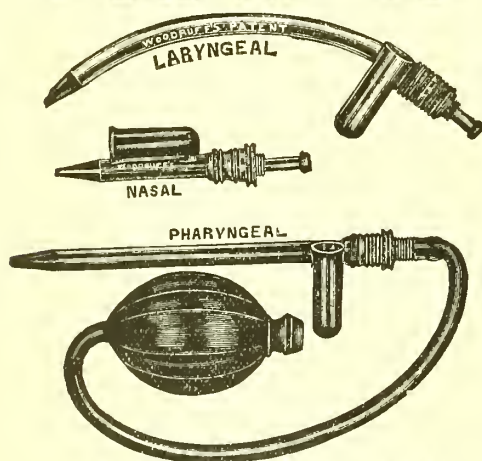
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An ideal apparatus for the administration and accurate use of Medicated Liquids or Solutions in minute quantities. The three forms shown are constructed so as to allow of the direct action of the Spray on the Larynx, Pharynx, and Mucous Membrane of the Nasal Cavity.

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PHARYNGEAL	54/- "	6/- "
NASAL	50/- "	5/6 "

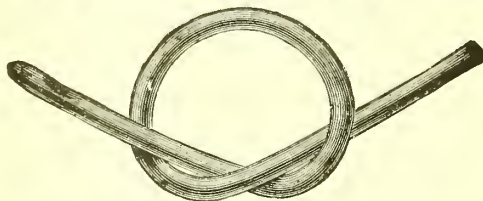
Spare Mounts, Bellows, and Pipettes are also supplied.

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WARRANTED WOVEN EYES, SOLID ENDS, VERY FLEXIBLE AND STRONG WEB.

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Conical	8/6 "
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Large Discount for Wholesale Buyers.

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**ABSOLUTELY
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QUININE TABLETS.

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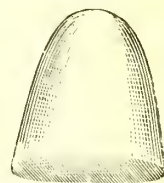
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Several Injunctions in the High Court of Justice having already been obtained against "Infringers" (reports of which have appeared in "The Chemist and Druggist," the most recent being in issue of April 24, 1897), W. J. RENDELL'S SOLICITORS are instructed to take proceedings against all persons (Makers or Vendors) fraudulently using the name of "W. J. RENDELL," "RENDELL," or any colourable imitation thereof, in connection with Pessaries *not* manufactured by

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Patentee Inventor, and Manufacturer of

ESTABLISHED 1833.

SURGICAL ELASTIC STOCKINGS, BELTS, SUSPENSORY BANDAGES, TRUSSES,

Surgical Appliances, Caoutchouc Articles, Waterproof and Airproof Goods, &c., &c.

WHOLESALE DEALER IN DRUGGISTS' SUNDRIES.

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SPECIALITIES.

TRUSSES FOR RUPTURES OF ALL KINDS. Equal to any supplied in London, Paris, or New York.

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Poro-Plastic Jackets and Steel Instruments for Curvature of the Spine moulded to the Patient. Splints and Instruments for Deformed Feet and Legs.

Chest Expanding Braces for Stooping Shoulders and Contracted Chests. Patent Elastic Surgical Stockings, without seams, for Varicose Veins, Sprains, &c.

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for all parts of the Body. Indiarubber Appliances, Invalid Furniture, Bath Chairs, Carriages, Crutches, Ear Trumpets, Throat, Ear, and Nose Instruments, &c.

Models taken of Deformed Feet, and Boots made to fit. Artificial Arms, Legs, &c.
Strong Cheap Articles for working men.

PATENT SPIRAL ELASTIC APPLIANCES, WITHOUT SEAMS,

which are much approved by all who have worn them, and are told most confidentially that they are the Surgical Appliances of the future. These Appliances—STOCKINGS, SOCKS, LEGGINGS, &c.—are made from PATENT MACHINERY, and are on an entirely different principle to those generally in use.

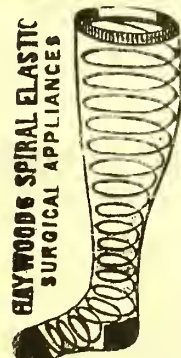
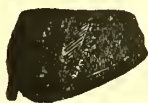
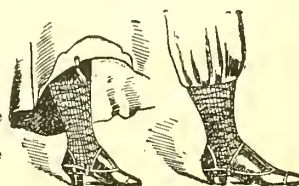
To Avoid Varicose Veins and Sprains, Cyclists should Wear

HAYWOOD'S PATENT ELASTIC GAITERS,

the ADVANTAGES of which are:—

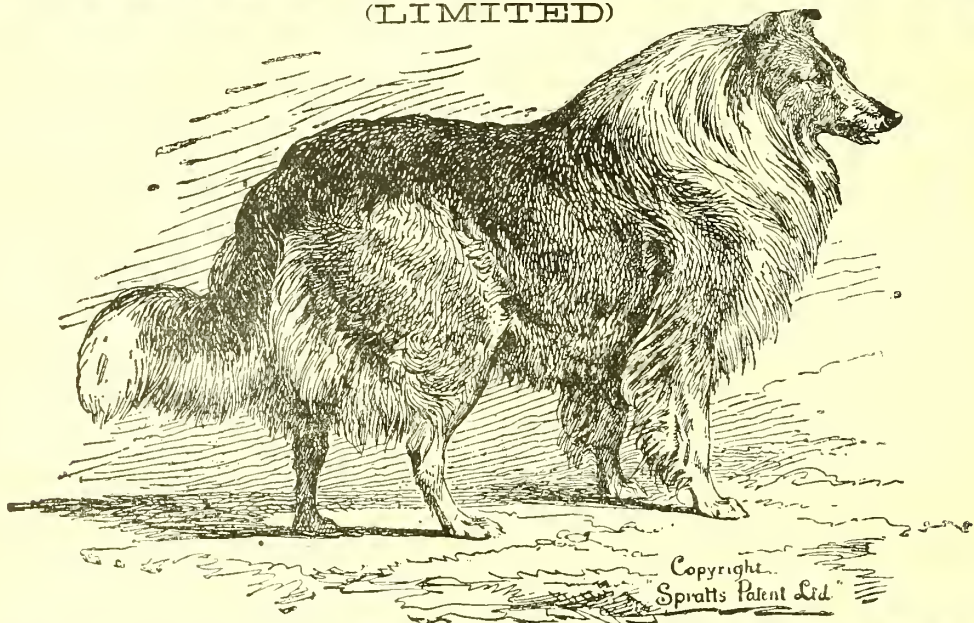
That having Threads of Indiarubber woven in them they support the muscles of the Leg and Ankle, and can be drawn on and off the Leg without the trouble of buttons.

That fitting closely to the limb they show the shape of the Ankle, and have not the clumsy appearance of the Cloth Gaiters, and do not ruck up.



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POWDER WEED KILLER.

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Immediately soluble in cold water.

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No return empties.

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Strength: 1 gall. sufficient for 25 galls. of water.

DOUBLE STRENGTH.

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Also best Kentish Hops in bulk.

QUASSIA CHIPS, QUASSIA CUPS, &c.

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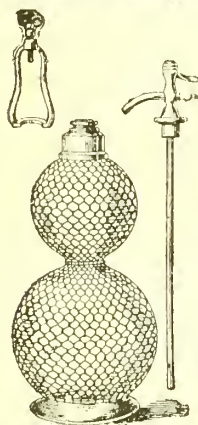
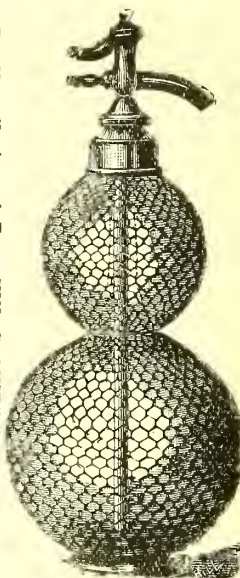
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The Best Seltzogene Extant & Warranted.
Wear and Working Guaranteed. No more
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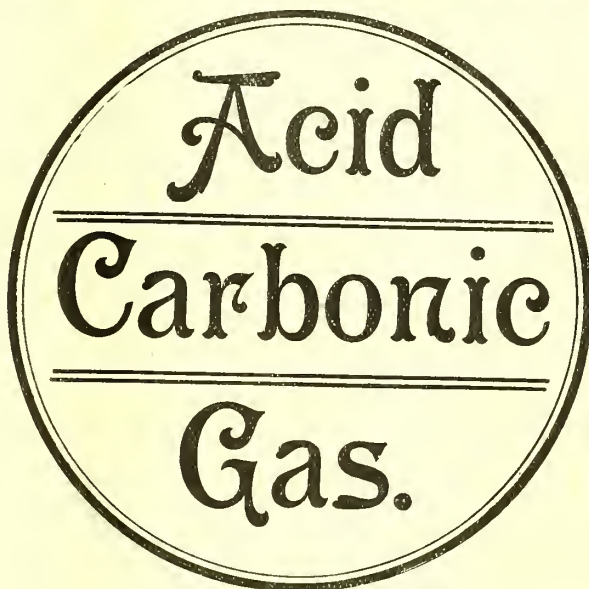
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achieved by supplying One Quality of Goods only—the Best ;
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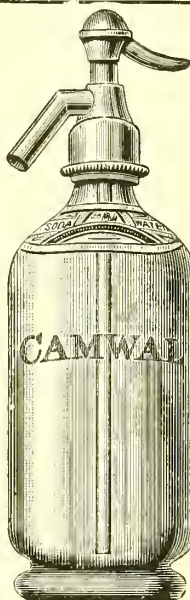
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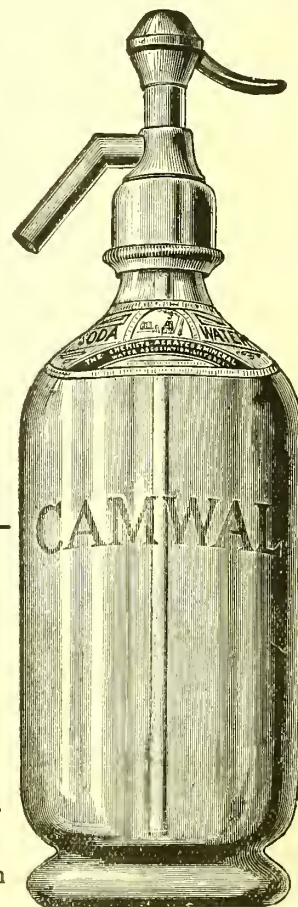
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Are made by Chemists for Chemists.

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make their own Syphons, and guarantee absolute purity of all materials employed. Metallic contamination is an impossibility.

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PURE GRANULATED, ENTIRELY FREE FROM COLOURING MATTER,
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A NEW DEPARTURE.

TARTARIC ACID SUPERSEDED

(See this Journal, 19/12/96, page 280).

British Materials. Inorganic. No Field for Germ Growths.
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THE SELTZOGENE PATENT CHARGES CO.
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70



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A Pleasant Beverage, superior to all other English and German Mineral Waters. It mollifies and qualifies all spirits; mixes well with wines. Relieves Alcoholic Thirst without depressing the system.

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— THE ONLY —

AMERICAN NATURAL MINERAL WATER
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Springs: GENEVA, NEW YORK.

— CURES AND PREVENTS —

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A DELIGHTFUL TABLE WATER

At HOTELS, CHEMISTS, STORES, or

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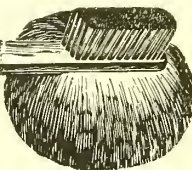
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TUSON'S Carbolic Disinfectants & Soap.

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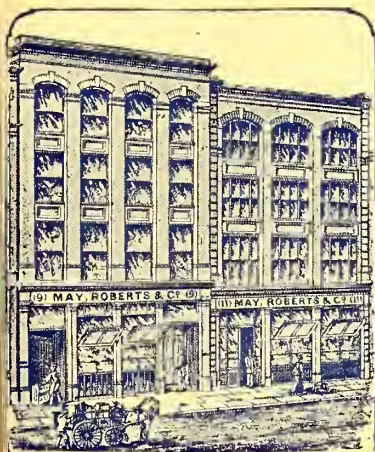
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6d. size per doz. 3/4
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White, Brown, and Black. In Glass-top Boxes. One Dozen.

ROUND, in Fancy Slide Cases, as Fig. 1 2/2 per dozen.
OVAL, in Tinfoil, as Fig. 2 No. 1, 1/3; No. 2, 2/3; No. 3, 3/3 "
OVAL, in Tinfoil with Caps... .. No. 2, 2/9; No. 3, 3/9 "
OVAL, in elegant Flat Slide Card Cases, as Fig. 3 3/3 "

The above are got up most attractively, with very artistic Labels and Cases in Colours.



Fig. 2



Fig. 3

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per gross 4/3
2d. boxes,
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6d. boxes,
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TOOTH POWDERS.

White Rose	Quinine	Pearl
Areca Nut	Charcoal	Astringent
Saponaceous	Eucalyptus	Lavender
Violet	Carbolic	Coral

Assorted in Glass-top Show-cases, per doz. 3/6

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2d. " 7/6 "
6d. " 3/6 per doz
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NO CHEMICALS USED IN CADBURY'S AS IN THE SO-CALLED PURE FOREIGN COCOAS.

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Per Case.

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